



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

JAMES H. TROGDON, III  
SECRETARY

January 13, 2020

MEMORANDUM TO: Clark Morrison PhD, P.E.  
State Pavement Design Engineer

Teresa Bruton, PE  
Design Build Manager

FROM: J. L. Pilipchuk, PE, LG  
State Geotechnical Engineer

DocuSigned by:  
*John Pilipchuk*  
52C44B94B8BE444...

STATE PROJECT: 44648.1.4 (R-5777C) Design-Build

COUNTY: Craven

DESCRIPTION: US 70 Improvements from Thurman Road (SR 1116) to the  
Havelock Bypass

SUBJECT: Pavement and Subgrade Inventory

The NCDOT Geotechnical Engineering Unit has completed the evaluation of the pavement and subgrade investigation and presents the following information.

The NCDOT Geotechnical Engineering Unit contracted Terracon to perform the pavement and subgrade investigation for R-5777C. The fieldwork was performed in July 2019. Terracon utilized a CME-45B drill rig to cut 4-inch pavement cores and auger approximately 6 feet below subgrade. Dynamic Cone Penetrometer Tests were conducted on subbase materials below the pavement and into the underlying soils to evaluate in-situ strengths. Representative soil and moisture samples were collected for visual field classification and laboratory analysis. Bulk samples were taken at select locations to be tested for CBR. Laboratory testing was performed by Terracon.

JLP/JBB

ATTACHMENT 1: Pavement and Subgrade Inventory 79

REFERENCE: R-5777C

PROJECT: 44648

SEE SHEET 3 FOR PLAN SHEET LAYOUT  
AT TIME OF INVESTIGATION

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STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
GEOTECHNICAL ENGINEERING UNIT

PAVEMENT AND  
SUBGRADE INVESTIGATION

COUNTY CRAVEN  
PROJECT DESCRIPTION US 70 IMPROVEMENTS FROM  
THURMAN ROAD (SR 1116) TO THE  
HAVELOCK BYPASS  
INVENTORY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5777C	1	79

CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N.C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (919) 707-6850. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (IN-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOIL MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOIL MOISTURE CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS INCLUDING TEMPERATURES, PRECIPITATION AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE PLANS ARE PRELIMINARY ONLY AND IN MANY CASES THE FINAL DESIGN DETAILS ARE DIFFERENT. FOR BIDDING AND CONSTRUCTION PURPOSES, REFER TO THE CONSTRUCTION PLANS AND DOCUMENTS FOR FINAL DESIGN INFORMATION ON THIS PROJECT. THE DEPARTMENT DOES NOT WARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERPRETATIONS MADE, OR OPINION OF THE DEPARTMENT AS TO THE TYPE OF MATERIALS AND CONDITIONS TO BE ENCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO MAKE SUCH INDEPENDENT SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO SATISFY HIMSELF AS TO CONDITIONS TO BE ENCOUNTERED ON THE PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

- NOTES:
- THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N.C. DEPARTMENT OF TRANSPORTATION AS ACCURATE NOR IS IT CONSIDERED PART OF THE PLANS, SPECIFICATIONS OR CONTRACT FOR THE PROJECT.
  - BY HAVING REQUESTED THIS INFORMATION, THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

PERSONNEL

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INVESTIGATED BY POWELL, S. H.

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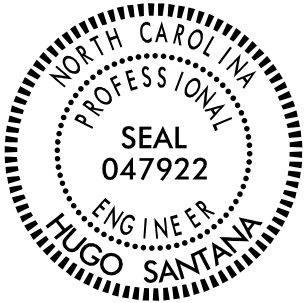
DATE JANUARY 2020

Prepared in the Office of:

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Consulting Engineers and Scientists

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NC REGISTERED GEOLOGIC FIRM: C-367



DocuSigned by:

Hugo Santana 1/13/2020

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DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PROJECT REFERENCE NO.

R-5777C

SHEET NO.

2

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

GEOTECHNICAL ENGINEERING UNIT

SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

SOIL DESCRIPTION

SOIL IS CONSIDERED UNCONSOLIDATED, SEMI-CONSOLIDATED, OR WEATHERED EARTH MATERIALS THAT CAN BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER AND YIELD LESS THAN 100 BLOWS PER FOOT ACCORDING TO THE STANDARD PENETRATION TEST (AASHTO T 206, ASTM D1586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY INCLUDE THE FOLLOWING: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. FOR EXAMPLE, *VERY STIFF, GRAY, SILTY CLAY, MOIST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6*

SOIL LEGEND AND AASHTO CLASSIFICATION

GENERAL CLASS.	GRANULAR MATERIALS ( ≤ 35% PASSING #200)							SILT-CLAY MATERIALS ( > 35% PASSING #200)							ORGANIC MATERIALS					
GROUP CLASS.	A-1		A-1-b		A-2-4		A-2-5	A-2-6	A-2-7	A-4	A-5	A-6	A-7	A-1, A-2	A-3	A-4, A-5	A-6, A-7			
SYMBOL																				
% PASSING	#10		#40		#200															
MATERIAL PASSING #40	LL		PI																	
GROUP INDEX	0		0		0															
USUAL TYPES OF MAJOR MATERIALS	STONE FRAGS. OF GRAVEL, AND SAND		FINE SAND		SILTY OR CLAYEY GRAVEL AND SAND															
GEN. RATING AS SUBGRADE	EXCELLENT TO GOOD							FAIR TO POOR							FAIR TO POOR		POOR		UNSUITABLE	

PI OF A-7-5 SUBGROUP IS ≤ LL - 30 ; PI OF A-7-6 SUBGROUP IS > LL - 30

GRADATION

WELL GRADED - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE. UNIFORMLY GRADED - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE. GAP-GRADED - INDICATES A MIXTURE OF UNIFORM PARTICLE SIZES OF TWO OR MORE SIZES.

ANGULARITY OF GRAINS

THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS IS DESIGNATED BY THE TERMS: ANGULAR, SUBANGULAR, SUBROUNDED, OR ROUNDED.

MINERALOGICAL COMPOSITION

MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHEN THEY ARE CONSIDERED OF SIGNIFICANCE.

COMPRESSIBILITY

SLIGHTLY COMPRESSIBLE	LL < 31
MODERATELY COMPRESSIBLE	LL = 31 - 50
HIGHLY COMPRESSIBLE	LL > 50

PERCENTAGE OF MATERIAL

ORGANIC MATERIAL	GRANULAR SOILS	SILT - CLAY SOILS	OTHER MATERIAL
TRACE OF ORGANIC MATTER	2 - 3%	3 - 5%	TRACE
LITTLE ORGANIC MATTER	3 - 5%	5 - 12%	LITTLE
MODERATELY ORGANIC	5 - 10%	12 - 20%	SOME
HIGHLY ORGANIC	> 10%	> 20%	HIGHLY

GROUND WATER

WATER LEVEL IN BORE HOLE IMMEDIATELY AFTER DRILLING

STATIC WATER LEVEL AFTER 24 HOURS

PERCHED WATER, SATURATED ZONE, OR WATER BEARING STRATA

SPRING OR SEEP

MISCELLANEOUS SYMBOLS

ROADWAY EMBANKMENT (RE) WITH SOIL DESCRIPTION

SOIL SYMBOL

ARTIFICIAL FILL (AF) OTHER THAN ROADWAY EMBANKMENT

INFERRED SOIL BOUNDARY

INFERRED ROCK LINE

ALLUVIAL SOIL BOUNDARY

DIP & DIP DIRECTION OF ROCK STRUCTURES

TEST BORING

AUGER BORING

CORE BORING

MONITORING WELL

PIEZOMETER INSTALLATION

SLOPE INDICATOR INSTALLATION

CONE PENETROMETER TEST

SOUNDING ROD

TEST BORING WITH CORE

SPT N-VALUE

ROCK DESCRIPTION

HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT REFUSAL IF TESTED, AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL. SPT REFUSAL IS PENETRATION BY A SPLIT SPOON SAMPLER EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS IN NON-COASTAL PLAIN MATERIAL. THE TRANSITION BETWEEN SOIL AND ROCK IS OFTEN REPRESENTED BY A ZONE OF WEATHERED ROCK. ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLLOWS:

NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT N VALUES > 100 BLOWS PER FOOT IF TESTED.

FINE TO COARSE GRAIN IGNEOUS AND METAMORPHIC ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES GRANITE, GNEISS, GABBRO, SCHIST, ETC.

FINE TO COARSE GRAIN METAMORPHIC AND NON-COASTAL PLAIN SEDIMENTARY ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES PHYLLITE, SLATE, SANDSTONE, ETC.

COASTAL PLAIN SEDIMENTS CEMENTED INTO ROCK, BUT MAY NOT YIELD SPT REFUSAL. ROCK TYPE INCLUDES LIMESTONE, SANDSTONE, CEMENTED SHELL BEDS, ETC.

WEATHERING

FRESH

ROCK FRESH, CRYSTALS BRIGHT, FEW JOINTS MAY SHOW SLIGHT STAINING. ROCK RINGS UNDER HAMMER IF CRYSTALLINE.

VERY SLIGHT (V SLI.)

ROCK GENERALLY FRESH, JOINTS STAINED, SOME JOINTS MAY SHOW THIN CLAY COATINGS IF OPEN. CRYSTALS ON A BROKEN SPECIMEN FACE SHINE BRIGHTLY. ROCK RINGS UNDER HAMMER BLOWS IF OF A CRYSTALLINE NATURE.

SLIGHT (SLI.)

ROCK GENERALLY FRESH, JOINTS STAINED AND DISCOLORATION EXTENDS INTO ROCK UP TO 1 INCH. OPEN JOINTS MAY CONTAIN CLAY. IN GRANITOID ROCKS SOME OCCASIONAL FELDSPAR CRYSTALS ARE DULL AND DISCOLORED. CRYSTALLINE ROCKS RING UNDER HAMMER BLOWS.

MODERATE (MOD.)

SIGNIFICANT PORTIONS OF ROCK SHOW DISCOLORATION AND WEATHERING EFFECTS. IN GRANITOID ROCKS, MOST FELDSPARS ARE DULL AND DISCOLORED, SOME SHOW CLAY. ROCK HAS DULL SOUND UNDER HAMMER BLOWS AND SHOWS SIGNIFICANT LOSS OF STRENGTH AS COMPARED WITH FRESH ROCK.

MODERATELY SEVERE (MOD. SEV.)

ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. IN GRANITOID ROCKS, ALL FELDSPARS DULL AND DISCOLORED AND A MAJORITY SHOW KAOLINIZATION. ROCK SHOWS SEVERE LOSS OF STRENGTH AND CAN BE EXCAVATED WITH A GEOLOGIST'S PICK. ROCK GIVES "CLUNK" SOUND WHEN STRUCK. *IF TESTED, WOULD YIELD SPT REFUSAL*

SEVERE (SEV.)

ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC CLEAR AND EVIDENT BUT REDUCED IN STRENGTH TO STRONG SOIL. IN GRANITOID ROCKS ALL FELDSPARS ARE KAOLINIZED TO SOME EXTENT. SOME FRAGMENTS OF STRONG ROCK USUALLY REMAIN. *IF TESTED, WOULD YIELD SPT N VALUES > 100 BPF*

VERY SEVERE (V SEV.)

ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC ELEMENTS ARE DISCERNIBLE BUT MASS IS EFFECTIVELY REDUCED TO SOIL STATUS, WITH ONLY FRAGMENTS OF STRONG ROCK REMAINING. SAPROLITE IS AN EXAMPLE OF ROCK WEATHERED TO A DEGREE THAT ONLY MINOR VESTIGES OF ORIGINAL ROCK FABRIC REMAIN. *IF TESTED, WOULD YIELD SPT N VALUES < 100 BPF*

COMPLETE

ROCK REDUCED TO SOIL. ROCK FABRIC NOT DISCERNIBLE, OR DISCERNIBLE ONLY IN SMALL AND SCATTERED CONCENTRATIONS. QUARTZ MAY BE PRESENT AS DIKES OR STRINGERS. SAPROLITE IS ALSO AN EXAMPLE.

ROCK HARDNESS

VERY HARD

CANNOT BE SCRATCHED BY KNIFE OR SHARP PICK. BREAKING OF HAND SPECIMENS REQUIRES SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.

HARD

CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.

MODERATELY HARD

CAN BE SCRATCHED BY KNIFE OR PICK. GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK. HAND SPECIMENS CAN BE DETACHED BY MODERATE BLOWS.

MEDIUM HARD

CAN BE GROOVED OR GOUGED 0.25 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. CAN BE EXCAVATED IN SMALL CHIPS TO PIECES 1 INCH MAXIMUM SIZE BY HARD BLOWS OF THE POINT OF A GEOLOGIST'S PICK.

SOFT

CAN BE GROVED OR GOUGED READILY BY KNIFE OR PICK. CAN BE EXCAVATED IN FRAGMENTS FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE.

VERY SOFT

CAN BE CARVED WITH KNIFE. CAN BE EXCAVATED READILY WITH POINT OF PICK. PIECES 1 INCH OR MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY FINGER NAIL.

FRACTURE SPACING

TERM	SPACING
VERY WIDE	MORE THAN 10 FEET
WIDE	3 TO 10 FEET
MODERATELY CLOSE	1 TO 3 FEET
CLOSE	0.16 TO 1 FOOT
VERY CLOSE	LESS THAN 0.16 FEET

BEDDING

TERM	THICKNESS
VERY THICKLY BEDDED	4 FEET
THICKLY BEDDED	1.5 - 4 FEET
THINLY BEDDED	0.16 - 1.5 FEET
VERY THINLY BEDDED	0.03 - 0.16 FEET
THICKLY LAMINATED	0.008 - 0.03 FEET
THINLY LAMINATED	< 0.008 FEET

INDURATION

FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC.

FRIABLE

RUBBING WITH FINGER FREES NUMEROUS GRAINS; GENTLE BLOW BY HAMMER DISINTEGRATES SAMPLE.

MODERATELY INDURATED

GRAINS CAN BE SEPARATED FROM SAMPLE WITH STEEL PROBE; BREAKS EASILY WHEN HIT WITH HAMMER.

INDURATED

GRAINS ARE DIFFICULT TO SEPARATE WITH STEEL PROBE; DIFFICULT TO BREAK WITH HAMMER.

EXTREMELY INDURATED

SHARP HAMMER BLOWS REQUIRED TO BREAK SAMPLE; SAMPLE BREAKS ACROSS GRAINS.

TERMS AND DEFINITIONS

ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER.

AQUIFER - A WATER BEARING FORMATION OR STRATA.

ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND.

ARGILLACEOUS - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS, OR HAVING A NOTABLE PROPORTION OF CLAY IN THEIR COMPOSITION, SUCH AS SHALE, SLATE, ETC.

ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT WHICH IT IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND SURFACE.

CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE.

COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE.

CORE RECOVERY (REC.) - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL DIVIDED BY TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.

DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT ROCKS OR CUTS MASSIVE ROCK.

DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL.

DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH.

FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE.

FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES.

FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM PARENT MATERIAL.

FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM.

FORMATION (FM) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD.

JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED.

LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT.

LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS.

MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS. MOTTLING IN SOILS USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE.

PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM.

RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK.

ROCK QUALITY DESIGNATION (ROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.

SAPROLITE (SAP.) - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK.

SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.

SLICKENSIDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE.

STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT) - NUMBER OF BLOWS (N OR BPF) OF A 140 LB. HAMMER FALLING 30 INCHES REQUIRED TO PRODUCE A PENETRATION OF 1 FOOT INTO SOIL WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS.

STRATA CORE RECOVERY (SREC.) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.

STRATA ROCK QUALITY DESIGNATION (SROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE.

TOPSOIL (TS.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.

TEXTURE OR GRAIN SIZE

U.S. STD. SIEVE OPENING (MM)	4	10	40	60	200	270
	4.76	2.00	0.42	0.25	0.075	0.053

BOULDER (BLDR.)	COBBLE (COB.)	GRAVEL (GR.)	COARSE SAND (CSE. SD.)	FINE SAND (F SD.)	SILT (SL.)	CLAY (CL.)

GRAIN SIZE	MM	305	75	2.0	0.25	0.05	0.005
	IN.	12	3				

SOIL MOISTURE - CORRELATION OF TERMS

SOIL MOISTURE SCALE (ATTERBERG LIMITS)	FIELD MOISTURE DESCRIPTION	GUIDE FOR FIELD MOISTURE DESCRIPTION
LL PLASTIC RANGE (PI) PL	- SATURATED - (SAT.)	USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE
	- WET - (W)	SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE
	- MOIST - (M)	SOLID; AT OR NEAR OPTIMUM MOISTURE
OM SHRINKAGE LIMIT SL	- DRY - (D)	REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE

PLASTICITY

	PLASTICITY INDEX (PI)	DRY STRENGTH
NON PLASTIC	0-5	VERY LOW
SLIGHTLY PLASTIC	6-15	SLIGHT
MODERATELY PLASTIC	16-25	MEDIUM
HIGHLY PLASTIC	26 OR MORE	HIGH

COLOR

DESCRIPTIONS MAY INCLUDE COLOR OR COLOR COMBINATIONS (TAN, RED, YELLOW-BROWN, BLUE-GRAY). MODIFIERS SUCH AS LIGHT, DARK, STREAKED, ETC. ARE USED TO DESCRIBE APPEARANCE.

EQUIPMENT USED ON SUBJECT PROJECT

DRILL UNITS:

☐ CME-45C

☐ CME-55

☐ CME-550

☐ VANE SHEAR TEST

☐ PORTABLE HOIST

☒ CME 45B (TER1974)

☐

ADVANCING TOOLS:

☐ CLAY BITS

☐ 6" CONTINUOUS FLIGHT AUGER

☐ 8" HOLLOW AUGERS

☐ HARD FACED FINGER BITS

☐ TUNG-CARBIDE INSERTS

☐ CASING ☐ W/ ADVANCER

☐ TRICONE \_\_\_\_\_ \* STEEL TEETH

☐ TRICONE \_\_\_\_\_ \* TUNG.-CARB.

☒ 4 1/4" THIN WALL CORE BARREL

☒ 3/4" SOLID STEM AUGERS

HAMMER TYPE:

☐ AUTOMATIC ☐ MANUAL

CORE SIZE:

☐ -B \_\_\_\_\_ ☐ -H \_\_\_\_\_

☐ -N \_\_\_\_\_

HAND TOOLS:

☐ POST HOLE DIGGER

☐ HAND AUGER

☐ SOUNDING ROD

☐ VANE SHEAR TEST

☐

DATE: 8-15-14







MATCHLINE SEE SHEET 5



MATCH LINE SEE SHEET 4

MATCH LINE SEE SHEET 6



LOCATION 1 WB ISS PAVEMENT STRUCTURE		LOCATION 1 WB OSL PAVEMENT STRUCTURE		LOCATION 1 WB OSS PAVEMENT STRUCTURE	
ASPHALT	9.5"	ASPHALT	12.0"	ASPHALT	8.25"
		ABC	11.0"	ABC	13.0"
		CONCRETE	NM	CONCRETE	NM



MATCH LINE SEE SHEET 5

MATCH LINE SEE SHEET 7



EASTBOUND US 70

LOCATION 2 EB EM

WESTBOUND US-70

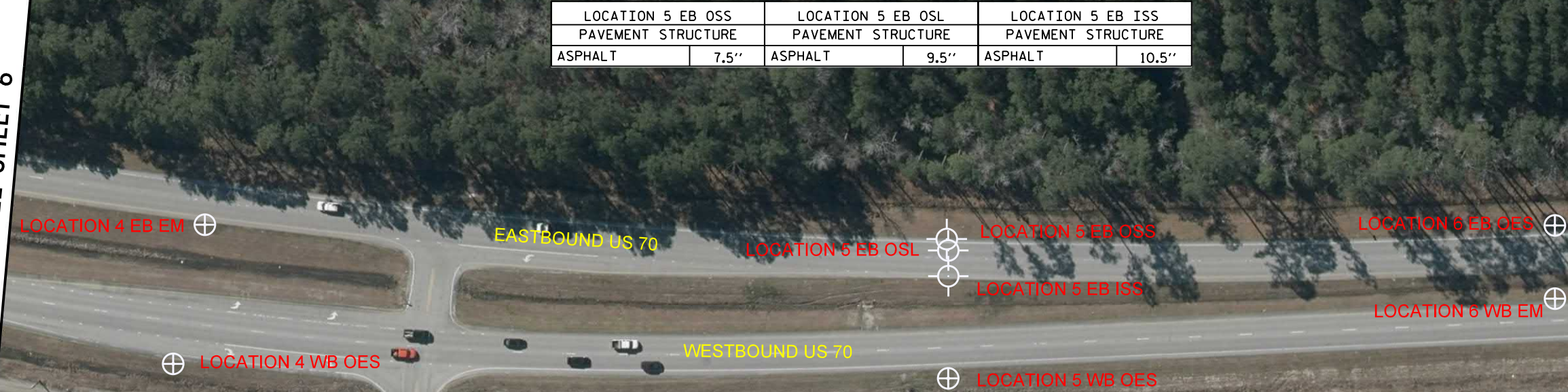
LOCATION 2 WB OES

LOCATION 3 EB OES

LOCATION 3 WB EM  
BULK-1



MATCH LINE SEE SHEET 6



MATCH LINE SEE SHEET 8



MATCH LINE SEE SHEET 7



MATCH LINE SEE SHEET 9



MATCH LINE SEE SHEET 8



PROJECT REFERENCE NO.	SHEET NO.
R-5777C	9

MATCH LINE SEE SHEET 10



MATCH LINE SEE SHEET 9

LOCATION 11 EB OSS		LOCATION 11 EB ISL		LOCATION 11 EB ISS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
ASPHALT	11.0"	ASPHALT	10.0"	ASPHALT	8.5"



MATCH LINE SEE SHEET 11



MATCH LINE SEE SHEET 10



MATCH LINE SEE SHEET 12



MATCH LINE SEE SHEET 11



LOCATION 15 WB ISS  
LOCATION 15 WB OSL  
LOCATION 15 WB OSS

LOCATION 15 WB ISS		LOCATION 15 WB OSL		LOCATION 15 WB OSS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
ASPHALT	9.0"	ASPHALT	12.0"	ASPHALT	8.25"



LOCATION 15 EB OES

EASTBOUND US 70



LOCATION 16 EB EM

WESTBOUND US 70



LOCATION 16 WB OES

WESTBOUND US 70 SERVICE ROAD

LOCATION 17 EB OES



LOCATION 17 WB EM



RAILROAD

COUNTY LINE ROAD

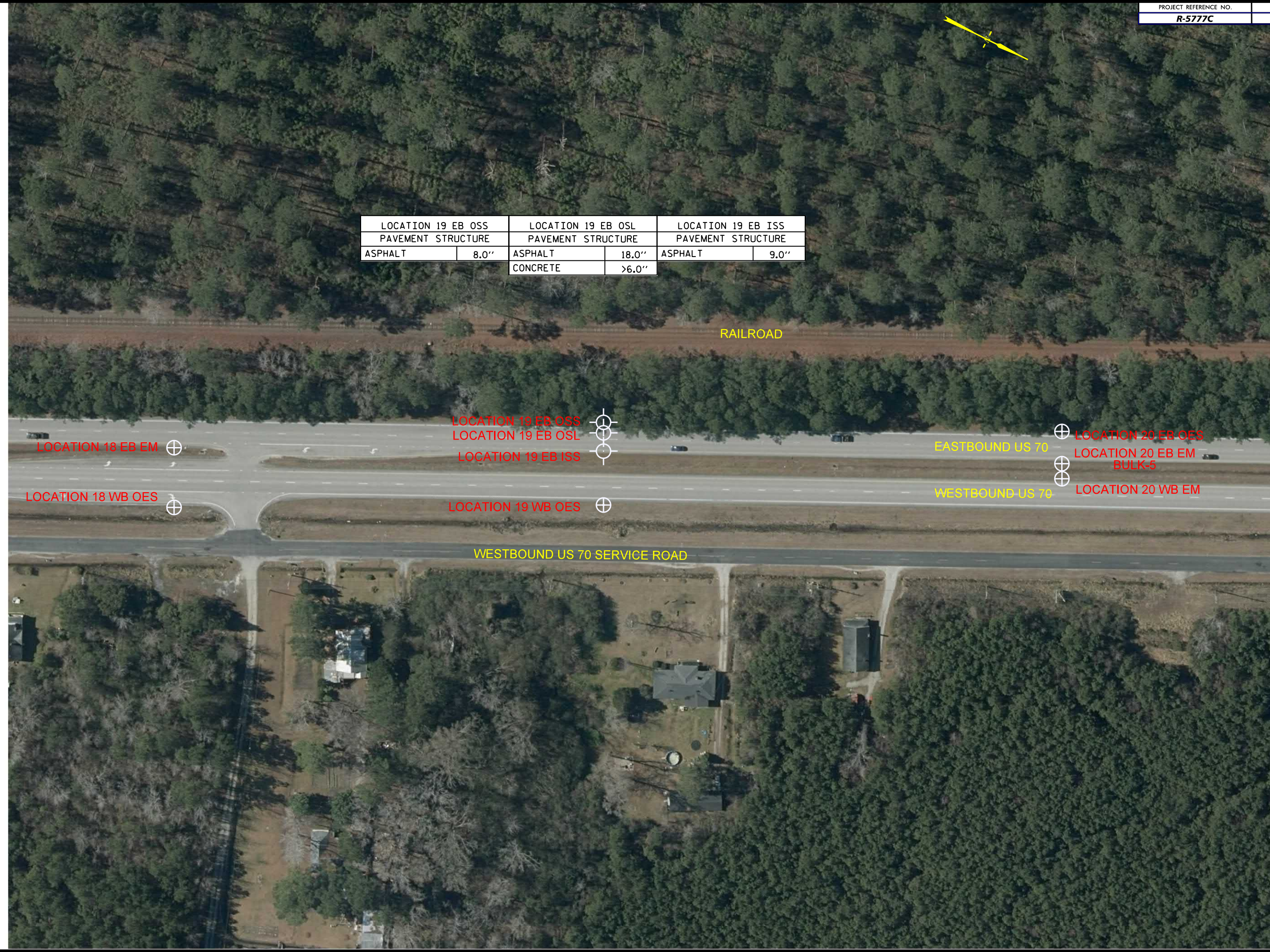
CROATAN WOODS DRIVE



MATCH LINE SEE SHEET 13



MATCH LINE SEE SHEET 12



MATCH LINE SEE SHEET 14



MATCH LINE SEE SHEET 13



MATCH LINE SEE SHEET 15



MATCH LINE SEE SHEET 14



MATCH LINE SEE SHEET 16



MATCH LINE SEE SHEET 15



MATCH LINE SEE SHEET 17



MATCH LINE SEE SHEET 16

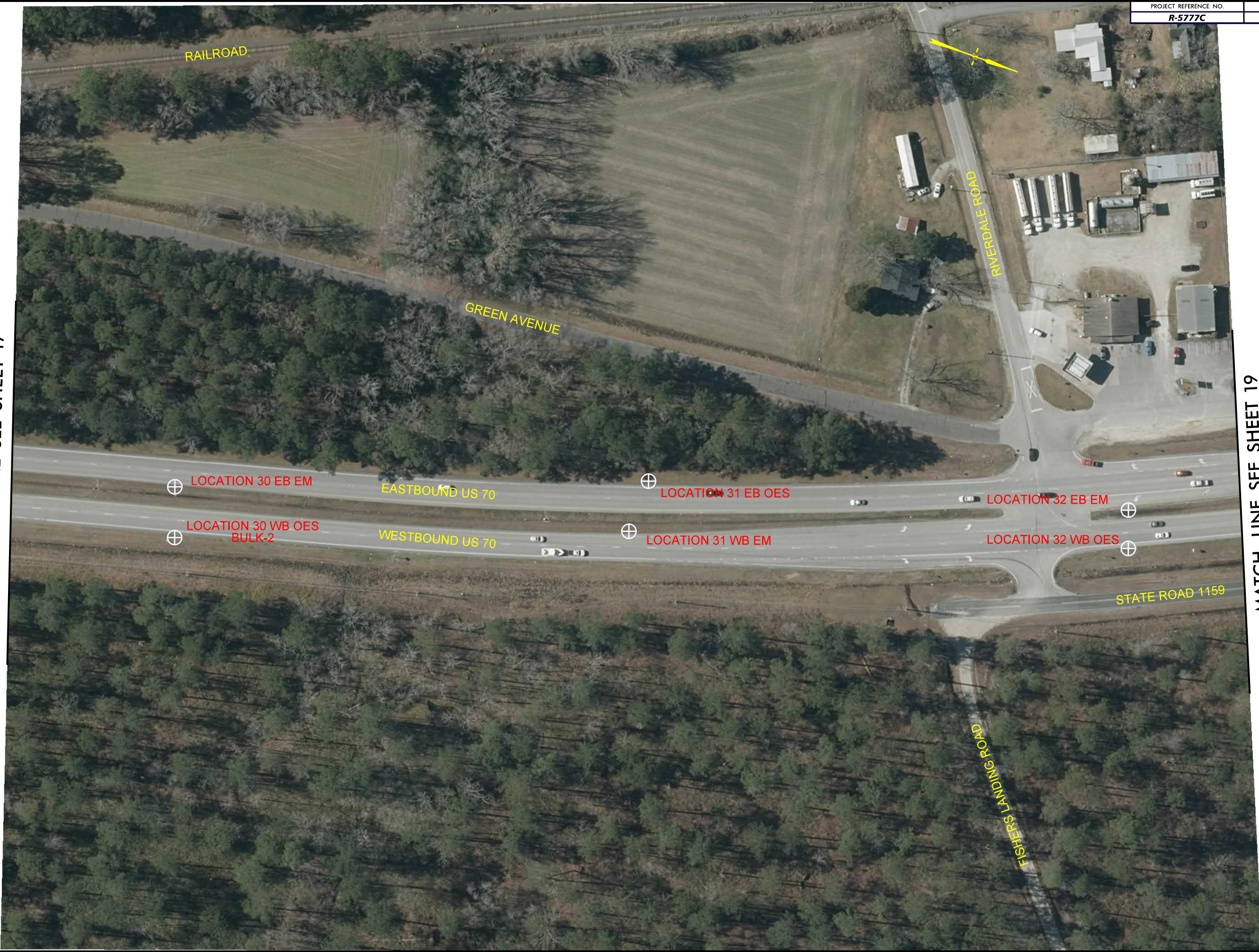


LOCATION 29 WB ISS		LOCATION 29 WB OSL		LOCATION 29 WB OSS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
ASPHALT	7.5"	ASPHALT	11.5"	ASPHALT	8.75"

MATCH LINE SEE SHEET 18



MATCH LINE SEE SHEET 17



MATCH LINE SEE SHEET 19



MATCH LINE SEE SHEET 18



LOCATION 33 EB OSS		LOCATION 33 EB ISL		LOCATION 33 EB ISS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
ASPHALT	8.5"	ASPHALT	18.0"	ASPHALT	8.5"

MATCH LINE SEE SHEET 20



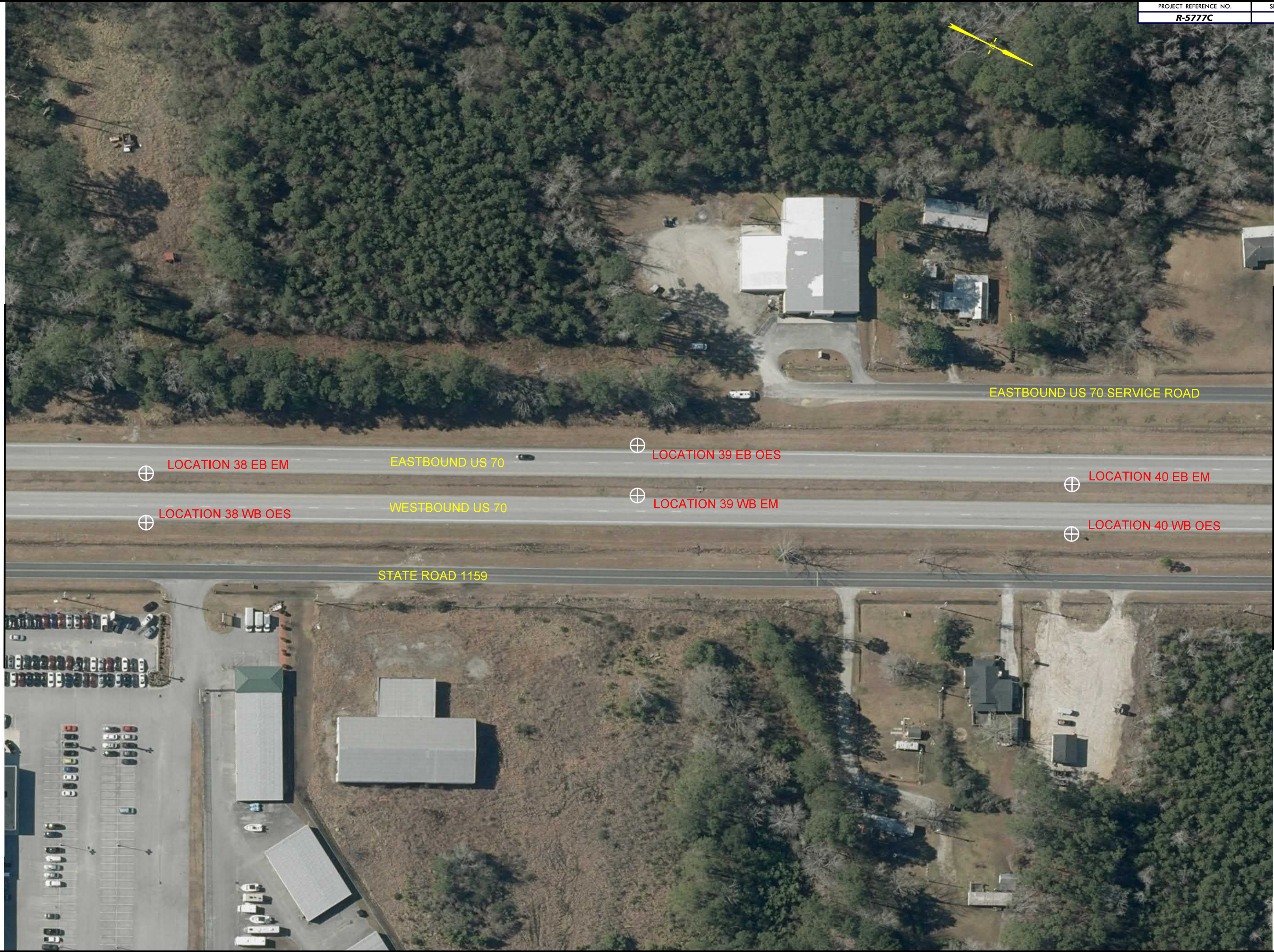
MATCH LINE SEE SHEET 19



MATCH LINE SEE SHEET 21



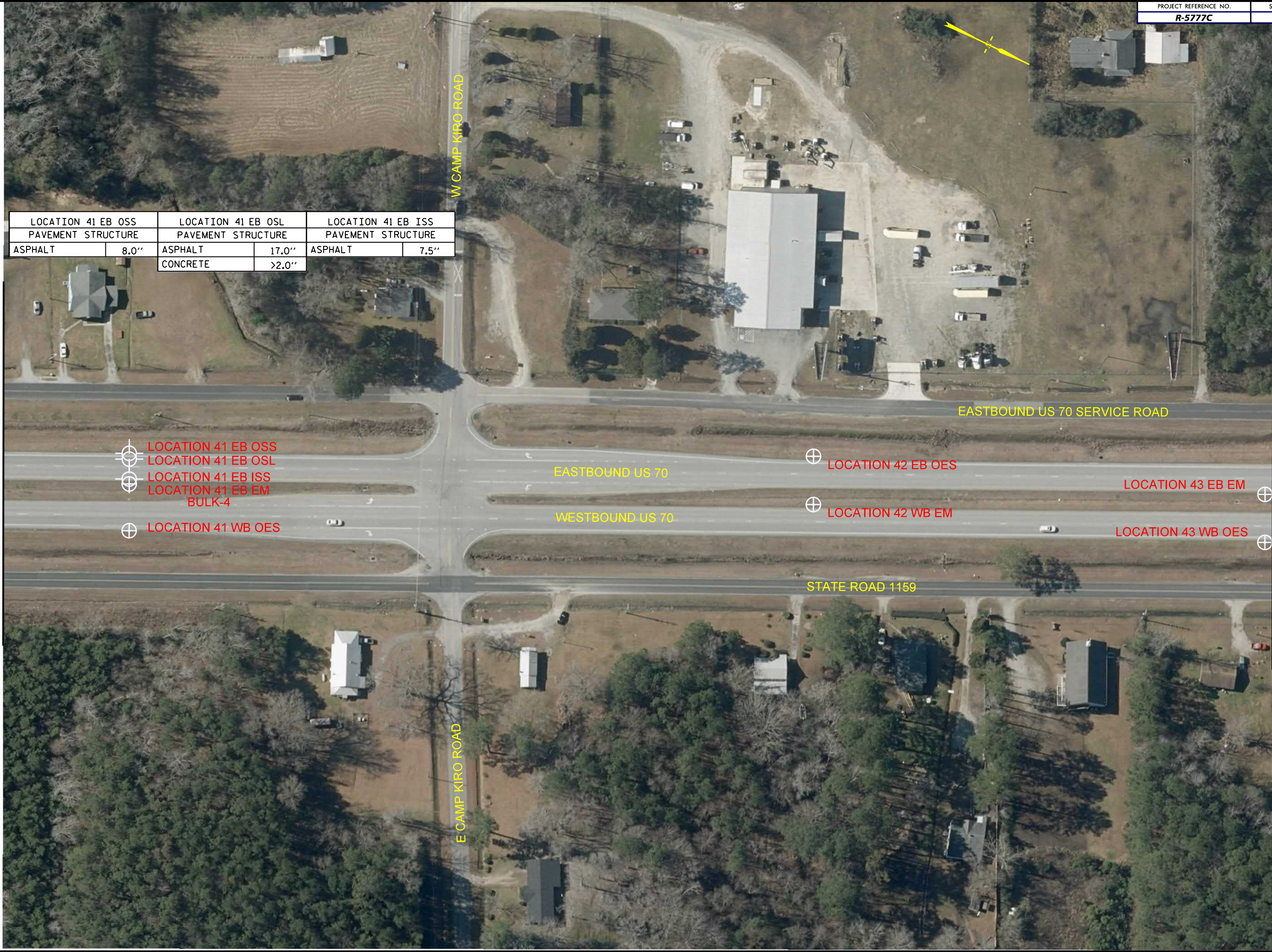
MATCH LINE SEE SHEET 20



MATCH LINE SEE SHEET 22



MATCH LINE SEE SHEET 21



MATCH LINE SEE SHEET 23



MATCH LINE SEE SHEET 22



MATCH LINE SEE SHEET 24



MATCH LINE SEE SHEET 23



MATCH LINE SEE SHEET 25



MATCH LINE SEE SHEET 24



PROJECT REFERENCE NO.	SHEET NO.
R-5777C	25

MATCH LINE SEE SHEET 26



MATCH LINE SEE SHEET 25



MATCH LINE SEE SHEET 27



MATCH LINE SEE SHEET 26



LOCATION 56 EB OSS		LOCATION 56 EB OSL		LOCATION 56 EB ISS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
ASPHALT	8.75"	ASPHALT	10.5"	ASPHALT	7.0"

PROJECT REFERENCE NO.	SHEET NO.
R-5777C	27

MATCH LINE SEE SHEET 28



MATCH LINE SEE SHEET 27





PAVEMENT INVESTIGATION DATA SHEET

Project:44648.1.4

TIP:R-5777C

County: CRAVEN

Route:US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - WESTBOUND

Date:7/22 - 7/30/19

Notes By:POWELL, S. H.

		Width				Pavement Structure , Thickness						Subgrade						GPS Coordinates	
Test Location	Cut or Fill (Estimated Depth in feet)	Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / (Total to Subgrade in inches)	Asphalt (inches)	Concrete (inches)	ABC (inches)			Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting
LOCATION 1 WB ISS	FILL 3	WB ISL 12.0	WB ISS 4.0	2.0 FY LT	S (LT)	ASPHALT (9.5)	9.5					0.8' - 3.0' ROADWAY EMBANKMENT: BROWN, BLACK, FINE SANDY CLAY	S-8	A-6	M	6	LOW SEVERITY LONGITUDINAL CRACKING IN CONSTRUCTION JOINT BETWEEN WB ISL AND WB OSL	446,480	2,613,545
		WB OSL 12.0	WB OSS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN : BLACK, GRAY, FINE SANDY CLAY	REF S-4	A-6	M				
LOCATION 1 WB OSL				2.0 FW LT		ASPHALT ABC CONCRETE (23.0)	12.0	NM	11.0			1.0' - 1.9' ROADWAY EMBANKMENT: ABC	REF S-23	A-2-4	M	1.9		446,487	2,613,564
												*AUGER REFUSAL AT 1.9 FEET ON CONCRETE							
LOCATION 1 WB OSS				2.0 FW RT		ASPHALT ABC CONCRETE (21.25)	8.25	NM	13.0			0.7' - 1.8' ROADWAY EMBANKMENT: ABC	REF S-23	A-2-4	M	1.8		446,493	2,613,571
												*AUGER REFUSAL AT 1.8 FEET ON CONCRETE							
LOCATION 2 WB OES	CUT 2	WB ISL 12.0	WB ISS 4.5	6.0 FW RT	S (LT)							1.0' - 3.5' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-3	A-6	M	6	MODERATE SEVERITY TRANSVERSE CRACKING IN WB OSL AND WB ISL	446,872	2,613,239
		WB OSL 12.0	WB OSS 3.5									3.5' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, FINE SANDY CLAY	S-1	A-6	W		LOW SEVERITY LONGITUDINAL CRACKING IN WB OSS		
LOCATION 3 WB EM	FILL 3	WB ISL 12.0	WB ISS 4.0	5.0 FY LT	C							1.0' - 3.0' ROADWAY EMBANKMENT: BLACK, GRAY, FINE SANDY CLAY	REF S-8	A-6	M	6	LOW SEVERITY FATIGUE CRACKING IN WB ISS AND WB ISL	447,241	2,612,830
		WB OSL 12.0	WB OSS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: BLACK, GRAY, FINE SANDY CLAY	REF S-4	A-6	M		LOW SEVERITY TRANSVERSE CRACKING IN WB ISL		
																	LOW SEVERITY LONGITUDINAL CRACKING IN CONSTRUCTION JOINT BETWEEN WB OSL AND WB ISL		
LOCATION 4 WB OES	GRADE LT	WB LTL 9.0	WB ISS 3.5	6 FW RT	S (LT)							1.0' - 3.5' ROADWAY EMBANKMENT: YELLOW-TAN, SILTY FINE TO COARSE SAND	REF S-12	A-2-4	D	6	LOW TO MODERATE SEVERITY FATIGUE CRACKING IN WB OSS	447,590	2,612,535
	FILL RT 3.5	WB ISL 12.5	WB OSS 3.5									3.5' - 6.0' UNDIVIDED COASTAL PLAIN: BLACK, GRAY, SILTY FINE SAND	S-2	A-2-4	W		MODERATE SEVERITY TRANSVERSE CRACKING IN WB LTL		
		WB OSL 13.0															LOW SEVERITY TRANSVERSE CRACKING IN WB ISL, WB OSL, AND WB RTL		
		WB RTL 12.5																	



PAVEMENT INVESTIGATION DATA SHEET

Project:

44648.1.4

TIP:

R-5777C

County:

CRAVEN

Date:

7/22 - 7/30/2019

Notes By:

POWELL, S. H.

Route:

US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - WESTBOUND

		Width				Pavement Structure , Thickness						Subgrade							GPS Coordinates	
Test Location	Cut or Fill (Estimated Depth in feet)	Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / Total to Subgrade in inches)	Asphalt (inches)	Concrete (inches)	ABC (inches)			Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting	
LOCATION 5 WB OES	GRADE LT	WB ISL 12.0	WB ISS 4.0	6.0 FW RT	C							1.0' - 2.0' ROADWAY EMBANKMENT: BROWN-BLACK, SILTY CLAY	REF S-9	A-7-6	M	6	LOW TO MODERATE SEVERITY FATIGUE CRACKING IN WB ISS AND WB ISL	447,909	2,612,032	
	FILL RT 2	WB OSL 12.0	WB OSL 4.0									2.0'- 4.0' UNDIVIDED COASTAL PLAIN: BLACK, GRAY, SILTY FINE SAND	REF S-2	A-2-4	M		MODERATE TANSVERSE CRACKING IN WB ISS, WB ISL, AND WB OSL			
														4.0' - 6.0' UNDIVIDED COASTAL PLAIN: LIGHT GRAY, FINE SANDY CLAY	REF S-1	A-6	M		MODERATE EDGE CRACKING IN WB OSS	
LOCATION 6 WB EM	GRADE	WB ISL 12.0	WB ISS 4.0	6.0 FY LT	C							1.0' - 3.0' UNDIVIDED COASTAL PLAIN: BROWN, TAN, CLAYEY FINE TO COARSE SAND	REF S-5	A-2-6	M	6	LOW TO MODERATE TRANSVERSE CRACKING IN WB OSL AND WB ISL	448,098	2,611,602	
		WB OSL 12.0	WB OSL 4.0									3.0'- 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-3	A-6	M		LOW SEVERITY FATIGUE CRACKING IN CENTER OF WB ISL			
LOCATION 7 WB OES	FILL 3.5	WB ISL 12.0	WB ISS 4.0	6.0 FW RT	C							1.0' - 3.5' ROADWAY EMBANKMENT: BLACK, GRAY, FINE SANDY CLAY	S-3	A-6	M	6	LOW SEVERITY TRANSVERSE CRACKING IN WB OSS, WB OSL, WB ISL, AND WB ISS	448,367	2,611,185	
		WB OSL 12.0	WB OSS 3.5										3.5' - 6.0' UNDIVIDED COASTAL PLAIN: BLACK- GRAY, FINE TO COARSE SANDY CLAY	REF S-1	A-6	W		LOW SEVERITY LONGITUDINAL CRACKING IN WB ISL		
LOCATION 8 WB ISS	GRADE	WB ISL 12.5	WB ISS 4.0	2.0 FY LT	C	ASPHALT (7.5)	7.5					0.6' - 3.0' UNDIVIDED COASTAL PLAIN: BLACK, SILTY FINE SAND	REF S-2	A-2-4	M	6	LOW TO MODERATE SEVERITY FATIGUE CRACKING IN CENTER AND INSIDE WHEEL PATH OF WB ISL	448,734	2,610,448	
		WB OSL 12.0	WB OSS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: BLACK, GRAY, SILTY CLAY	S-9	A-7-6	W		LOW SEVERITY LONGITUDINAL CRACKING IN CONSTRUCTION JOINT BETWEEN WB OSL AND WB ISL			
LOCATION 8 WB ISL				3.0 FY RY		ASPHALT CONCRETE (19.25)	11.0	8.25				1.6' - 6.0' UNDIVIDES COASTAL PLAIN: GRAY, FINE SANDY CLAY	REF S-1	A-6	W	6		448,741	2,610,451	
LOCATION 8 WB OSS				2.0 FW RT		ASPHALT (8.75)	8.75					0.7' - 2.5' UNDIVIDED COASTAL PLAIN: BLACK, GRAY, TAN, FINE SANDY CLAY	REF S-3	A-6	M	6		448,754	2,610,470	
													2.5' - 6.0' UNDIVIDED COASTAL PLAIN: BLACK, GRAY, TAN, FINE SANDY CLAY	S-4	A-6	W				
LOCATION 9 WB OES	GRADE	WB ISL 13.0	WB ISS 4.0	5.5 FW RT	C							1.0' - 2.0' UNDIVIDED COASTAL PLAIN: TAN, YELLOW, SILTY FINE SAND	REF S-2	A-2-4	M	6	LOW SEVERITY TRANSVERSE CRACKING IN WB ISS, WB ISL, WB OSL, AND WB OSS	449,032	2,609,972	
		WB OSL 12.5	WB OSS 3.5									2.0' - 6.0' UNDIVIDED COASTAL PLAIN: BLACK, GRAY, TAN, FINE SANDY CLAY	REF S-4	A-6	M		LOW SEVERITY FATIGUE CRACKING IN WB ISS			



PAVEMENT INVESTIGATION DATA SHEET

Project:

44648.1.4

TIP:

R-5777C

County:

CRAVEN

Route:

US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - WESTBOUND

Date:

7/22 - 7/30/2019

Notes By:

POWELL, S. H.

		Width				Pavement Structure , Thickness					Subgrade							GPS Coordinates	
Test Location	Cut or Fill (Estimated Depth in feet)	Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / (Total to Subgrade in inches)	Asphalt (inches)	Concrete (inches)	ABC (inches)			Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting
LOCATION 10 WB EM	FILL 3.5	WB ISL 12.0	WB ISS 4.0	7.0 FY LT	C							1.0' - 3.5' ROADWAY EMBANKMENT: BLACK, SILTY FINE SAND	REF S-2	A-2-4	M	6	MODERATE SEVERITY TRANSVERSE CRACKING IN WB OSL, WB ISL, WB OSS, AND WB ISS	449,272	2,609,450
		WB OSL 12.0	WB OSS 4.0									3.5' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, SILTY FINE SAND	S-10	A-2-4	W		LOW SEVERITY FATIGUE CRACKING IN INSIDE WHEEL PATH OF WB ISL		
LOCATION 11 WB OES	FILL 2.5	WB LTL 11.5	WB ISS 2.5	4.0 FW RT	S (RT)							1.0' - 2.5' ROADWAY EMBANKMENT: BROWN, BLACK, CLAYEY FINE TO COARSE SAND	S-5	A-2-6	M	6	LOW SEVERITY TRANSVERSE CRACKING IN WB LTL	449,758	2,608,714
		WB ISL 12.0	WB OSS 3.0									2.5' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-4	A-6	M		LOW SEVERITY LONGITUDINAL CRACKING IN WB ISL		
		WB OSL 12.5															LOW SEVERITY FATIGUE CRACKING WB OSL		
		WB RTL 13.0																	
LOCATION 12 WB EM	FILL 3	WB ISL 12.0	WB ISS 4.0	6.0 FY LT	S (RT)							DCP ONLY DUE TO POSSIBLE UTILITY					LOW SEVERITY FATIGUE CRACKING IN OUTSIDE WHEEL PATH OF WB ISL, CENTER OF WB OSL, AND OUTSIDE WHEEL PATH OF WB OSL	450,016	2,608,303
		WB OSL 12.0	WB OSS 4.0																
LOCATION 13 WB OES	FILL 3	WB ISL 12.0	WB ISS 4.0	6.0 FW RT	S (RT)							1.0' - 3.0' ROADWAY EMBANKMENT: BROWN, BLACK, CLAYEY FINE TO COARSE SAND	REF S-5	A-2-6	M	6	LOW SEVERITY TRANSVERSE CRACKING IN OUTSIDE WHEEL PATH OF WB ISL	450,399	2,607,957
		WB OSL 12.0	WB OSS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, SILTY FINE SAND	REF S-10	A-2-4	W				
LOCATION 14 WB EM	FILL 3.5	WB ISL 12.5	WB ISS 4.0	6.0 FY LT	S (RT)							1.0' - 3.5' ROADWAY EMBANKMENT: BROWN, BLACK, FINE TO COARSE SANDY CLAY	REF S-8	A-6	M	6	LOW SEVERITY FATIGUE CRACKING IN OUTSIDE WHEEL PATH OF WB ISL AND WB OSL	450,733	2,607,563
		WB OSL 12.0	WB OSS 4.0									3.5' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, SILTY FINE SAND	REF S-10	A-2-4	W		LOW SEVERITY LONGITUDINAL CRACKING ALONG CONSTRUCTION JOINT OF WB OSL AND WB ISL		

Notes:

NB = Northbound  
SB = Southbound  
EB = Eastbound  
WB = Westbound

OSL = Outside Lane  
CL = Center Lane  
ISL = Inside Lane  
MP = Mile Post

COL = Collector Lane  
ACCEL = Acceleration Lane  
DECEL = Deceleration Lane

LTL = Left Turn Lane  
CTL = Center Turn Lane  
RTL = Right Turn Lane

RT = Right  
LT = Left  
(I) = Inside  
(O) = Outside

RT LN = Right Lane  
LT LN = Left Lane

OSS = Outside Shoulder  
ISS = Inside Shoulder  
PS = Paved Shoulder

OES = Outside Earth Shoulder  
EM = Earth Median

FW = From White Line  
FY = From Yellow Line  
AR = Auger Refusal  
NM = Not Measured





PAVEMENT INVESTIGATION DATA SHEET

Project:

44648.1.4

TIP:

R-5777C

County:

CRAVEN

Date:

7/22 - 7/30/2019

Notes By:

POWELL, S. H.

Route:

US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - WESTBOUND

		Width				Pavement Structure , Thickness						Subgrade							GPS Coordinates	
Test Location	Cut or Fill (Estimated Depth in feet)	Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / (Total to Subgrade in inches)	Asphalt (inches)	Concrete (inches)	ABC (inches)			Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting	
LOCATION 15 WB ISS	FILL LT 3.5	WB ISL 12.0	WB ISS 4.0	2.0 FY LT	S (RT)	ASPHALT (9.0)	9.0					0.8' - 3.5' ROADWAY EMBANKMENT: YELLOW, TAN, SILTY COARSE TO FINE SAND	REF S-6	A-2-4	M	6	LOW SEVERITY TRANSVERSE CRACKING IN WB OSL  LOW SEVERITY FATIGUE CRACKING IN BOTH WHEEL PATHS PF WB OSL	451,295	2,607,122	
	FILL RT 2	WB OSL 12.0	WB OSS 4.0								3.5' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK FINE SANDY CLAY	REF S-4	A-6	W						
LOCATION 15 WB OSL				3.0 FW LT		ASPHALT (12.0)	12.0					1.0' - 2.0' ROADWAY EMBANKMENT: GRAY, WHITE, SILTY COARSE TO FINE SAND	S-6	A-2-4	W	6		451,299	2,607,129	
											2.0' - 6.0' UNDIVIDED COASTAL PLAIN: BLACK, GRAY, FINE SANDY CLAY	REF S-4	A-6	W						
LOCATION 15 WB OSS				2.0 FW RT		ASPHALT (8.25)	8.25					0.7' - 2.0' ROADWAY EMBANKMENT: GRAY, WHITE, SILTY COARSE TO FINE SAND	REF S-6	A-2-4	W	6		451,308	2,607,147	
											2.0' - 6.0' UNDIVIDED COASTAL PLAIN: BLACK, GRAY, FINE SANDY CLAY	REF S-4	A-6	W						
LOCATION 16 WB OES	FILL 2.5	WB ISL 12.0	WB ISS 4.0	6.0 FW RT	C						1.0' - 2.5' ROADWAY EMBANKMENT: GRAY, BROWN, SILTY FINE SAND	REF S-2	A-2-4	M	6	LOW SEVERITY FATIGUE CRACKING IN BOTH WHEEL PATHS OF WB ISL	451,740	2,606,911		
		WB OSL 12.0	WB OSS 4.0							2.5' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, FINE SANDY CLAY	REF S-4	A-6	W							
LOCATION 17 WB EM	FILL 4	WB ISL 12.5	WB ISS 4.0	6.0 FW LT	C						1.0' - 4.0' ROADWAY EMBANKMENT: BLACK, GRAY, SILTY FINE SAND	REF S-2	A-2-4	M	6	LOW SEVERITY FATIGUE CRACKING IN BOTH WHEEL PATHS OF WB ISL	452,201	2,606,647		
		WB OSL 12.0	WB OSS 4.0							4.0' - 6.0' UNDIVIDED COASTAL PLAIN: TAN, BLACK, FINE SANDY CLAY	REF S-1	A-6	W							
LOCATION 18 WB OES	FILL 3	WB LTL 11.0	WB ISS 4.0	6.0 FW RT	C						1.0' - 3.0' ROADWAY EMBANKMENT: BROWN, GRAY, SILTY FINE SAND	REF S-2	A-2-4	W	6	LOW SEVERITY TRANSVERSE CRACKING IN WB OSL AND WB ISL  LOW SEVERITY EDGE CRACKING IN WB ISS  MODERATE SEVERITY LONGITUDINAL CRACKING IN WB RTL	452,664	2,606,482		
		WB ISL 12.0	WB OSS 4.0							3.0' - 6.0' UNDIVIDED COASTAL PLAIN: TAN, BLACK. FINE SANDY CLAY	REF S-1	A-6	W							
		WB OSL 12.5												M						
		WB RTL 12.0									*AUGER REFUSAL AT 1.9 FEET ON CONCRETE									
LOCATION 19 WB OES	FILL 3	WB ISL 12.0	WB ISS 4.0	6.0 FW RT	C						1.0' - 3.0' ROADWAY EMBANKMENT: TAN, BROWN, SILTY FINE SAND	REF S-2	A-2-4	M	6	LOW SEVERITY FATIGUE CRACKING IN BOTH WHEEL PATHS OF WB ISL	453,088	2,606,268		
		WB OSL 12.5	WB OSS 4.0							3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, FINE SANDY CLAY	S-7	A-6	M							



PAVEMENT INVESTIGATION DATA SHEET

Project:

44648.1.4

TIP:

R-5777C

County:

CRAVEN

Route:

US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - WESTBOUND

Date:

7/22 - 7/30/2019

Notes By:

POWELL, S. H.

		Width				Pavement Structure , Thickness					Subgrade							GPS Coordinates	
Test Location	Cut or Fill (Estimated Depth in feet)	Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / (Total to Subgrade in inches)	Asphalt (inches)	Concrete (inches)	ABC (inches)			Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting
LOCATION 20 WB EM	FILL 3	WB ISL 12.0	WB ISS 4.0	6.0 FY LT	C							1.0' - 3.0' ROADWAY EMBANKMENT: BROWN, BLACK, GRAY, SILTY FINE SAND	S-18	A-2-4	M	6	LOW SEVERITY FATIGUE CRACKING IN BOTH WHEEL PATHS OF THE WB OSL AND WB ISL	453,529	2,606,017
		WB OSL 12.0	WB OSS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-15	A-6	M				
LOCATION 21 WB OES	FILL 4	WB ISL 12.0	WB ISS 4.0	6.0 FW RT	C							1.0' - 4.0' ROADWAY EMBANKMENT: BLACK, BROWN SILTY FINE SAND	REF S-2	A-2-4	M	6	LOW SEVERITY TRANSVERSE CRACKING IN WB OSL AND WB OSS	454,018	2,605,824
		WB OSL 12.0	WB OSS 4.0									4.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, FINE SANDY CLAY	S-11	A-6	M				
LOCATION 22 WB EM	FILL 4	WB ISL 12.0	WB ISS 4.0	6.0 FY LT	C							1.0' - 4.0' ROADWAY EMBANKMENT: GRAY, BROWN, FINE SANDY CLAY	REF S-8	A-6	M	6	LOW SEVERITY FATIGUE CRACKING IN THE OUTSIDE WHEEL PATH OF WB ISL	454,443	2,605,581
		WB OSL 12.0	WB OSS 4.0									4.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, FINE SANDY CLAY	REF S-13	A-6	M				
LOCATION 23 WB ISS	FILL 4	WB ISL 12.5	WB ISS 4.0	2.0 FY LT	C	ASPHALT (10.0)	10.0					0.8' - 4.0' ROADWAY EMBANKMENT: GRAY, FINE TO COARSE SANDY SILT	REF S-19	A-4	W	6	LOW SEVERITY FATIGUE CRACKING IN BOTH WHEEL PATHS PF WB OSL	455,036	2,605,302
		WB OSL 12.5	WB OSS 4.0									4.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-20	A-6	M		LOW SEVERITY TRANSVERSE CRACKING IN WB OSL		
LOCATION 23 WB ISL				2.0 FY RT		ASPHALT (11.25)	11.25					1.0' - 4.0' ROADWAY EMBANKMENT: GRAY, FINE TO COARSE SANDY SILT	S-19	A-4	W	6		455,039	2,605,309
												4.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	S-20	A-6	M				
LOACTION 23 WB OSS				2.0 FW LT		ASPHALT (9.25)	9.25					0.8' - 4.0' ROADWAY EMBANKMENT: YELLOW, TAN, SILTY FINE TO COARSE SAND, TRACE GRAVEL	S-12	A-2-4	M	6		455,049	2,605,328
												4.0' - 6.0' UNDIVIDED COASTAL PLAIN: BLACK, GRAY, FINE SANDY CLAY	REF S-11	A-6	W				
LOCATION 24 WB OES	FILL 3	WB ISL 12.0	WB ISS 4.0	6.0 FW RT	C							1.0' - 3.0' ROADWAY EMBANKMENT: BROWN, BLACK, FINE SANDY CLAY	REF S-8	A-6	M	6	MODERATE BLOCK AND FATIGUE CRACKING IN INSIDE WHEEL PATH OF WB OSL	455,522	2,605,108
		WB OSL 12.5	WB OSS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-11	A-6	M		LOW SEVERITY TRANSVERSE CRACKING IN WB OSS AND INSIDE WHEEL PATH OF WB ISL		
LOCATION 25 WB EM	FILL 4	WB ISL 12.5	WB ISS 4.0	6.0 FY LT	C							1.0' - 4.0' ROADWAY EMBANKMENT: GRAY, TAN SILTY FINE SAND	S-21	A-2-4	M	6	MODERATE SEVERITY FATIGUE CRACKING IN BOTH WHEEL PATHS OF WB ISL AND WB OSL	455,925	2,604,875
		WB OSL 12.0	WB OSS 4.0									4.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, FINE SANDY CLAY	REF S-11	A-6	M				



PAVEMENT INVESTIGATION DATA SHEET

Project:44648.1.4

TIP:R-5777C

County:CRAVEN

Route:US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - WESTBOUND

Date:7/24 - 7/27/2019

Notes By:POWELL, S. H.

		Width				Pavement Structure , Thickness					Subgrade							GPS Coordinates	
Test Location	Cut or Fill (Estimated Depth in feet)	Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / (Total to Subgrade in inches)	Asphalt (inches)	Concrete (inches)	ABC (inches)			Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting
LOCATION 26 WB OES	FILL 3.5	WB ISL 12.0	WB ISS 4.0	6.0 FW RT	C							1.0' - 3.5' ROADWAY EMBANKMENT: BLACK, GRAY, TAN, SILTY FINE SAND	REF S-2	A-2-4	M	6	MODERATE SEVERITY FATIGUE CRACKING IN BOTH WHEEL PATHS OF WB ISL AND WB OSL	456,493	2,604,645
		WB OSL 12.5	WB OSS 4.5									3.5' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK FINE SANDY CLAY	S-13	A-6	M				
LOCATION 27 WB EM	FILL 3.5	WB ISL 12.5	WB ISS 4.0	6.0 FW LT	S (RT)							1.0' - 3.5' ROADWAY EMBANKMENT: BROWN, GRAY, TAN, SILTY FINE SAND	REF S-21	A-2-4	M	6	MODERATE SEVERITY FATIGUE CRACKING IN INSIDE WHEEL PATH OF WB OSL	457,385	2,604,224
		WB OSL 12.0	WB OSS 4.0									3.5' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BROWN, FINE SANDY CLAY	REF S-13	A-6	W		LOW SEVERITY FATIGUE CRACKING IN OUTSIDE WHEEL PATH OF WB OSL AND BOTH WHEEL PATHS OF WB ISL		
LOCATION 28 WB OES	FILL 3	WB ISL 12.0	WB ISS 4.0	6.0 FW RT	C							1.0' - 3.0' ROADWAY EMBANKMENT: BROWN, BLACK, FINE SANDY CLAY	REF S-8	A-6	M	6	LOW TO MODERATE TRANSVERSE CRACKING IN WB OSL AND WB OSS	457,861	2,604,125
		WB OSL 12.0	WB OSS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, FINE SANDY CLAY	REF S-11	A-6	M			MODERATE SEVERITY FATIGUE CRACKING IN BOTH WHEEL PATHS OF WB OSL	
LOCATION 29 WB ISS	FILL 3	WB ISL 12.0	WB ISS 4.0	2.0 FY LT	C	ASPHALT (7.5)	7.5					0.6' - 3.0' ROADWAY EMBANKMENT: GRAY, TAN, FINE TO COARSE SANDY SILT	REF S-19	A-4	W	6	MODERATE SEVERITY FATIGUE CRACKING IN INSIDE WHEEL PATH OF WB ISL  HIGH SEVERITY LONGITUDINAL CRACKING IN INSIDE WHEEL PATH OF WB OSL	458,500	2,603,920
		WB OSL 12.0	WB OSS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-20	A-6	W				
LOACTION 29 WB OSL				1.5 FW LT		ASPHALT (11.5)	11.5					1.0' - 3.0' ROADWAY EMBANKMENT: GRAY, SILTY FINE TO COARSE SAND	REF S-14	A-2-4	W	6		458,505	2,603,937
												3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, TAN, FINE SANDY CLAY	S-15	A-6	M				
LOCAITON 29 WB OSS				2.0 FW RT		ASPHALT (8.75)	8.75					0.7' - 3.0' ROADWAY EMBANKMENT: GRAY, TAN, SILTY FINE TO COARSE SAND	S-14	A-2-4	W	6		458,508	2,603,949
												3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-13	A-6	M				
LOCATION 30 WB OES	FILL 3.5	WB ISL 12.0	WB ISS 4.0	6.0 FW RT	C							1.0' - 3.5' ROADWAY EMBANKMENT: YELLOW, BROWN, SILTY FINE SAND	S-16	A-2-4	M	6	NO DISTRESSES OBSERVED	458,986	2,603,826
		WB OSL 12.0	WB OSS 4.0									3.5' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, TAN, FINE SANDY CLAY	REF S-11	A-6	M				
LOCATION 31 WB EM	FILL 2	WB ISL 12.5	WB ISS 4.0	6.0 FY LT	S (LT)							1.0' - 2.0' ROADWAY EMBANKMENT: BROWN, GRAY, SILTY FINE SAND	REF S-21	A-2-4	M	6	MODERATE SEVERITY FATIGUE CRACKING IN BOTH WHEEL PATHS OF WB ISL	459,455	2,603,649
		WB OSL 12.0	WB OSS 4.0									2.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BROWN, BLACK, FINE SANDY CLAY	REF S-13	A-6	M				



PAVEMENT INVESTIGATION DATA SHEET

Project:44648.1.4

TIP:R-5777C

County:CRAVEN

Route:US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - WESTBOUND

Date:7/22 - 7/30/2019

Notes By:POWELL, S. H.

		Width				Pavement Structure , Thickness					Subgrade							GPS Coordinates	
Test Location	Cut or Fill (Estimated Depth in feet)	Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / (Total to Subgrade in inches)	Asphalt (inches)	Concrete (inches)	ABC (inches)			Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting
LOCATION 32 WB OES	FILL 3.5	WB ISL 12.0	WB ISS 4.0	6.0 FW RT	C							1.0' - 3.5' ROADWAY EMBANKMENT: YELLOW, TAN, SILTY FINE SAND	REF S-16	A-2-4	M	6	LOW SEVERITY BLOCK CRACKING IN BOTH WHEEL PATHS OF WB ISL AND INSIDE WHEEL PATH OF WB OSL	459,980	2,603,480
		WB OSL 12.0	WB OSS 4.0									3.5' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, SILTY FINE TO COARSE SAND	REF S-14	A-2-4	M		MODERATE FATIGUE CRACKING IN WB ISL		
LOCATION 33 WB OES	FILL 4	WB ISL 12.0	WB ISS 3.5	6.0 FW RT	C							1.0' - 4.0' ROADWAY EMBANKMENT: YELLOW, TAN, BROWN, SILTY FINE TO COARSE SAND	REF S-16	A-2-4	M	6	MODERATE SEVERITY FATIGUE CRACKING ALONG INSIDE WHEEL PATH OF WB OSL	460,426	2,603,272
		WB OSL 12.5	WB OSS 5.0									4.0' - 6.0' UNDIVIDED COASTAL PLAIN: BROWN, GRAY, BLACK, FINE TO COARSE SANDY CLAY	S-17	A-6	M				
LOCATION 34 WB EM	FILL 3	WB ISL 12.5	WB ISS 3.5	6.0 FY LT	C							1.0' - 4.0' ROADWAY EMBANKMENT: BROWN, GRAY, BLACK, FINE SANDY CLAY	REF S-39	A-6	M	6	LOW SEVERITY FATIGUE CRACKING IN INSIDE WHEEL PATH OF WB ISL	460,884	2,603,015
		WB OSL 12.0	WB OSS 4.0									4.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE TO COARSE SANDY SILT	REF S-19	A-4	M		LOW SEVERITY TRANSVERSE CRACKING IN WB OSL		
LOCATION 35 WB OES	FILL 2.5	WB ISL 12.0	WB ISS 4.0	6.0 FW RT	C							1.0' - 2.5' ROADWAY EMBANKMENT: BROWN, GRAY, FINE SANDY CLAY	REF S-8	A-6	M	6	LOW SEVERITY TRANSVERSE CRACKING IN BOTH WHEEL PATHS OF WB OSL	461,343	2,602,838
		WB OSL 12.5	WB OSS 4.0									2.5' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, TAN, FINE SANDY CLAY	REF S-11	A-6	M		LOW SEVERITY FATIGUE CRACKING IN INSIDE WHEEL PATH OF WB OSL AND INSIDE WHEEL PATH OF WB ISL		
																	SHOVING ON WB OSL		
LOCATION 36 WB EM	GRADE	WB LTL 10.5	WB ISS 4.5	6.0 FY LT	C							1.0' - 5.0' UNDIVIDED COASTAL PLAIN: GRAY, BROWN, BLACK, FINE TO COARSE SANDY SILT	REF S-19	A-4	M	6	MODERATE SEVERITY FATIGUE CRACKING IN WB ISS	461,759	2,602,594
		WB ISL 10.5	WB OSS 5.5									5.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-15	A-6	W		LOW SEVERITY FATIGUE CRACKING IN OUTSIDE WHEEL PATH OF WB ISL		
		WB OSL 12.0															MODERATE SEVERITY LONGITUDINAL CRACKING AT CONSTRUCTION JOINT OF WB RTL AND WB OSL		
		WB RTL 10.5																	



PAVEMENT INVESTIGATION DATA SHEET

Project:44648.1.4

TIP:R-5777C

County:CRAVEN

Route:US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - WESTBOUND

Date:7/22 - 7/30/2019

Notes By:POWELL, S. H.

		Width				Pavement Structure , Thickness						Subgrade							GPS Coordinates	
Test Location	Cut or Fill (Estimated Depth in feet)	Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / (Total to Subgrade in inches)	Asphalt (inches)	Concrete (inches)	ABC (inches)			Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting	
LOCATION 37 WB ISS	FILL 3	WB ISL 12.0	WB ISS 4.0	8.0 FW RT	C	ASPHALT (9.0)	9.0					0.8' - 4.0' ROADWAY EMBANKMENT: GRAY, BROWN, BLACK, FINE TO COARSE SANDY SILT	REF S-19	A-4	M	6	LO SEVERITY FATIGUE CRACKING ALONG INSIDE WHEEL PATH OF WB OSL	462,294	2,602,354	
		WB OSL 12.5	WB OSS 4.0								4.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-20	A-6	W						
LOCATION 37 WB ISL				2.0 FY LT		ASPHALT (12.0)	12.0					1.0' - 3.0' ROADWAY EMBANKMENT: YELLOW, TAN, SILTY FINE SAND	REF S-12	A-2-4	W	6		462,298	2,602,361	
												3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-13	A-6	M					
LOCATION 37 WB OSS				2.0 FW RT		ASPHALT (9.0)	9.0					0.8' - 3.0' ROADWAY EMBANKMENT: GRAY, BLACK, TAN, SILTY FINE SAND	REF S-14	A-2-4	M	6		462,291	2,602,386	
												3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-15	A-6	M					
LOCATION 38 WB OES	GRADE	WB ISL 12.0	WB ISS 4.0	6.0 FW RT	S LT							1.0' - 6.0' UNDIVIDED COASTAL PLAIN: BROWN, YELLOW, TAN, FINE SANDY CLAY	REF S-17	A-6	M	6.0	RUTTING IN WB OSL AND WB ISL	462,742	2,602,177	
		WB OSL 12.5	WB OSS 4.0											LOW TO MODERATE SEVERITY LONGITUDINAL CRACKING IN WB OSL ALONG CONSTRUCTION JOINT OF WB ISL						
LOCATION 39 WB EM	FILL 3	WB ISL 12.0	WB ISS 4.0	6.0 FY LT	C							1.0' - 4.0' ROADWAY EMBANKMENT: GRAY, BROWN, SILTY FINE SAND	REF S-21	A-2-4	M	6	LOW SEVERITY TRANSVERSE CRACKING IN WB ISL WB ISL, AND WB OSS	463,217	2,601,914	
		WB OSL 12.0	WB OSS 4.0								4.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE TO COARSE SANDY SILT	REF S-19	A-4	W		LOW SEVERITY LONGITUDINAL CRACKING ALONG CONSTRUCTION JOINT BETWEEN WB OSL AND WB ISL				
LOCATION 40 WB OES	FILL 4	WB ISL 12.5	WB ISS 3.5	6.0 FW RT	C							1.0' - 4.0' ROADWAY EMBANKMENT: BROWN, GRAY, FINE SANDY CLAY	REF S-11	A-6	M	6	LOW SEVERITY TRANSVERSE CRACKING IN WB OSL, WB ISL, WB OSS, AND WB ISS	463,666	2,601,743	
		WB OSL 12.0	WB OSS 4.0							4.0' - 6.0' UNDIVIDED COASTAL PLAIN: BROWN, TAN, FINE SANDY CLAY	REF S-13	A-6	M		LOW SEVERITY LONGITUDINAL CRACKING IN INSIDE WHEEL PATH OF WB OSL AND ALONG CONSTRUCTION JOINT BETWEEN WB OSL AND WB ISL					
																LOW SEVERITY EDGE CRACKING IN WB ISS				
LOCATION 41 WB OES	FILL 3	WB ISL 12.0	WB ISS 4.0	6.0 FW RT	C							1.0' - 3.0' ROADWAY EMBANKMENT: GRAY, BROWN, FINE SANDY CLAY	REF S-11	A-6	M	6	LOW TO MODERATE SEVERITY LONGITUDINAL CRACKING ALONG THE CONSTRUCTION JOINT BETWEEN WB OSL AND WB OSS	463,992	2,601,586	
		WB OSL 12.5	WB OSS 4.0							3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, FINE SANDY CLAY	REF S-13	A-6	M		LOW TO MODERATE TRANSVERSE CRACKING THROUGH ALL WB LANES					
																LOWSEVERITY FATIGUE CRACKING IN THE OUTSIDE WHEEL PATH OF WB ISL				



PAVEMENT INVESTIGATION DATA SHEET

Project:44648.1.4

TIP:R-5777C

County:CRAVEN

Route:US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - WESTBOUND

Date:7/22 - 7/30/2019

Notes By:POWELL, S. H.

		Width				Pavement Structure , Thickness					Subgrade							GPS Coordinates	
Test Location	Cut or Fill (Estimated Depth in feet)	Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / (Total to Subgrade in inches)	Asphalt (inches)	Concrete (inches)	ABC (inches)			Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting
LOCATION 42 WB EM	GRADE	WB ISL 12.0	WB ISS 4.0	6.0 FY LT	C							1.0' - 3.0' - UNDIVIDED COASTAL PLAIN: BROWN, GRAY, BLACK, SILTY FINE SAND	REF S-21	A-2-4	M	6	LOW SEVERITY LONGITUDINAL CRACKING ALONG THE WB OSL CONSTRUCTION JOINT WITH WB ISL	464,658	2,601,231
		WB OSL 11.5	WB OSS 4.5									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-20	A-6	M				
LOCATION 43 WB OES	FILL 3.5	WB ISL 12.0	WB ISS 4.0	6.0 FW RT	C							1.0' - 3.5' ROADWAY EMBANKMENT: BROWN, BLACK, SILTY FINE SAND	REF S-21	A-2-4	M	6	LOW SEVERITY FATIGUE CRACKING IN INSIDE WHEEL PATH OF WB OSL AND BOTH WHEEL PATHS OF WB ISL	465,125	2,601,051
		WB OSL 12.0	WB OSS 4.0									3.5' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	S-22	A-6	M				
LOCATION 44 WB ISS	FILL 3	WB ISL 12.0	WB ISS 4.0	2.0 FY LT	C	ASPHALT ABC (9.3)	9.25					0.8' - 3.0' ROADWAY EMBANKMENT: GRAY, WHITE, SILTY FINE TO COARSE SAND	REF S-23	A-2-4	M	6	LOW SEVERITY TRANSVERSE CRACKING IN BOTH WHEEL PATHS OF WB OSL AND THE OUTSIDE WHEEL PATH OF WB ISL  LOW SEVERITY FATIGUE CRACKING IN THE WB ISL AND WB ISS	465,636	2,600,773
		WB OSL 11.5	WB OSS 4.5									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BROWN, BLACK, FINE SANDY CLAY	S-26	A-6	M				
LOCATION 44 WB OSL				2.0 FW LT		ASPHALT ABC (11.3)	11.25					0.9' - 3.0' ROADWAY EMBANKMENT: GRAY, WHITE, SILTY FINE TO COARSE SAND	REF S-23	A-2-4	W	6		465,645	2,600,791
												3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-22	A-6	M				
LOCATION 44 WB OSS				2.0 FW RT		ASPHALT ABC (9.5)	9.5					0.8' - 3.0' ROADWAY EMBANKMENT: GRAY, WHITE, SILTY FINE TO COARSE SAND	S-23	A-2-4	W	6		465,649	2,600,800
												3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-22	A-6	M				
LOCATION 45 WB EM	FILL 3.5	WB ISL 12.0	WB ISS 4.0	6.0 FY LT	C							1.0' - 3.5' ROADWAY EMBANKMENT: BROWN, GRAY, CLAYEY FINE TO COARSE SAND	REF S-25	A-2-6	M	6	LOW SEVERITY FATIGUE CRACKING IN CENTER OF WB OSL	466,371	2,600,421
		WB OSL 12.5	WB OSS 4.0									3.5' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, TAN, YELLOW, FINE SANDY CLAY	S-27	A-6	M				
LOCATION 46 WB OES	FILL 3	WB ISL 12.5	WB ISS 3.5	6.0 FW LT	C							1.0' - 3.0' ROADWAY EMBANKMENT: YELLOW, TAN, SILTY FINE TO COARSE SAND	REF S-12	A-2-4	M	6	SHOVING IN WB ISL  LOW SEVERITY LONGITUDINAL CRACKING IN INSIDE WHEEL PATH OF WB OSL  LOW SEVERITY TRANSVERSE CRACKING IN INSIDE WHEEL PATH OF WB ISL  LOW SEVERITY EDGE CRACKING IN WB ISS	466,834	2,600,242
		WB OSL 12.0	WB OSS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-22	A-6	M				



PAVEMENT INVESTIGATION DATA SHEET

Project:44648.1.4

TIP:R-5777C

County:CRAVEN

Route:US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - WESTBOUND

Date:7/22 - 7/30/2019

Notes By:POWELL, S. H.

		Width				Pavement Structure , Thickness					Subgrade							GPS Coordinates	
Test Location	Cut or Fill (Estimated Depth in feet)	Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / Total to Subgrade in inches	Asphalt (inches)	Concrete (inches)	ABC (inches)			Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting
LOCATION 47 WB EM	FILL 4	WB ISL 12.0	WB ISS 3.5	6.0 FY LT	C							1.0' - 4.0' ROADWAY EMBANKMENT: YELLOW, TAN, GRAY, SILTY FINE SAND	REF B-3	A-2-4	M	6	SHOVING IN WB OSL	467,299	2,599,983
		WB OSL 12.0	WB OSS 4.0									4.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-26	A-6	M		LOW SEVERITY FATIGUE CRACKING IN OUTSIDE WHEEL PATH OF WB ISL		
LOCATION 48 WB OES	FILL 3	WB ISL 12.0	WB ISS 4.0	7.0 FW RT	C							1.0' - 3.0' ROADAY EMBANKMENT: YELLOW, TAN, SILTY FINE TO COARSE SAND	REF S-12	A-2-4	M	6	LOW SEVERITY FATIGU E CRACKING IN CENTER OF WB OSL	467,621	2,599,872
		WB OSL 12.0	WB OSS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: BLACK, GRAY, FINE SANDY CLAY	REF S-22	A-6	M		SHOVING IN WB OSL		
																	LOW SEVERITY LONGITUDINAL CRACKING IN INSIDE WHEEL PATH OF WB OSL		
LOCATION 49 WB EM	FILL 3	WB ISL 12.5	WB ISS 4.0	6.0 FY LT	C							1.0' - 3.0' ROADWAY EMBANKMENT: BROWN, GRAY, TAN, CLAYEY FINE TO COARSE SAND	REF S-25	A-2-6	M	6	SHOVING IN WB OSL	468,042	2,599,634
		WB OSL 12.0	WB OSS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, TAN, FINE SANDY CLAY	REF S-27	A-6	M		LOW SEVERITY EDGE CRACKING ON WB ISS		
LOCATION 50 WB OES	FILL 3	WB LTL 8.0	WB ISS 4.0	9.0 FW RT	C							1.0' - 3.0' ROADWAY EMBANKMENT: TAN, YELLOW, SILTY FINE SAND	REF S-21	A-2-4	M	6	MODERATE LONGITUDINAL CRACKING IN WB RTL CONTRUSTION JOINT	468,519	2,599,458
		WB ISL 12.0	WB OSS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, SILTY FINE SAND	S-24	A-2-4	M		SHOVING IN WB ISL		
		WB OSL 12.0															MODERATE LONGITUDINAL CRACKING IN WB LTL ALONG CONSTRUCTION JOINT		
		WB RTL 10.0																	
LOCATION 51 WB EM	FILL 4.5	WB ISL 12.5	WB ISS 4.0	6.0 FY LT	C							1.0' - 4.5' ROADWAY EMBANKMENT: TAN, BROWN, GRAY, CLAYEY FINE TO COARSE SAND	REF S-25	A-2-6	M	6	SHOVING ON WB OSL AND WB ISL	468,962	2,599,197
		WB OSL 12.0	WB OSS 4.0									4.5' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-27	A-6	M		LOW SEVERITY FATIGUE CRACKING IN BOTH WHEEL PATH OF WB ISL		
																	LOW SEVERITY EDGE CRACKING IN WB ISS		



PAVEMENT INVESTIGATION DATA SHEET

Project:44648.1.4

TIP:R-5777C

County:CRAVEN

Route:US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - WESTBOUND

Date:7/22 - 7/30/2019

Notes By:POWELL, S. H.

		Width				Pavement Structure , Thickness					Subgrade							GPS Coordinates	
Test Location	Cut or Fill (Estimated Depth in feet)	Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / (Total to Subgrade in inches)	Asphalt (inches)	Concrete (inches)	ABC (inches)			Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting
LOCATION 52 WB ISS	FILL 3	WB ISL 12.0	WB ISS 3.5	2.0 FY LT	C	ASPHALT (8.75)	8.75					0.7' - 3.0' ROADWAY EMBANKMENT: BROWN, BLACK, GRAY, CLAYEY FINE TO COARSE SAND	REF S-25	A-2-6	M	6	LOW SEVERITY FATIGUE CRACKING IN WB OSL AND WB ISL	469,427	2,598,981
		WB OSL 12.0	WB OSS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-26	A-6	M		MODERATE LONGITUDINAL CRACKING IN INSIDE WHEEL PATH OF WB ISL		
LOCATION 52 WB OSL				1.0 FW LT		ASPHALT (10.25)	10.25					0.9' - 3.0' ROADWAY EMBANKMENT: TAN, YELLOW, SILTY FINE TO COARSE SAND	REF B-3	A-2-4	M	6		469,436	2,599,000
												3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, SILTY FINE TO COARSE SAND	REF S-23	A-2-4	M				
LOCATION 52 WB OSS				2.0 FW RT		ASPHALT (8.0)	8.0					0.7' - 3.0' ROADWAY EMBANKMENT: TAN, YELLOW, SILTY FINE TO COARSE SAND	REF S-12	A-2-4	M	6		469,439	2,599,007
												3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, SILTY FINE TO COARSE SAND	REF S-23	A-2-4	M				
LOCATION 53 WB OES	FILL 3	WB ISL 11.5	WB ISS 3.5	6.0 FW RT	C							1.0' - 3.0' ROADWAY EMBANKMENT: BROWN, GRAY, BLACK, FINE SANDY CLAY	REF S-8	A-6	M	6	LOW TO MODERATE SEVERITY LONGITUDINAL CRACKING IN WB RTL ALONG CONSTRUCTION JOINT	469,888	2,598,812
		WB OSL 12.5	WB OSS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: BROWN, GRAY, SILTY FINE SAND	REF S-21	A-2-4	M				
		WB RTL 11.5																	
LOCATION 54 WB EM	FILL 4	WB ISL 12.0	WB ISS 4.0	5.0 FY LT	C							1.0' - 4.0' ROADWAY EMBANKMENT: BROWN, GRAY, CLAYEY FINE TO COARSE SAND	REF S-25	A-2-6	M	6	LOW SEVERITY FATIGUE CRACKING IN BOTH WHEEL PATHS OF WB OSL	470,308	2,598,561
		WB OSL 12.0	WB OSS 4.5									4.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, FINE SANDY CLAY	REF S-22	A-6	M		LOW SEVERITY FATIGUE CRACKING IN WB ISS		
LOCATION 55 WB OES	FILL 4	WB ISL 12.0	WB ISS 4.0	6.0 FW RT	C							1.0' - 4.0' ROADWAY EMBANKMENT: BROWN, BLACK, GRAY, FINE SANDY CLAY	REF S-8	A-6	M	6	MODERATE SEVERITY LONGITUDINAL CRACKING IN WB RTL ALONG CONSTRUCTION JOINT	470,808	2,598,376
		WB OSL 12.0	WB OSS 4.0									4.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, SILTY FINE SAND	REF S-18	A-2-4	M				
		WB RTL 8.5																	
LOCATION 56 WB OES	FILL 3	WB ISL 12.0	WB ISS 4.0	8.0 FW RT	C							1.0' - 3.0' ROADWAY EMBANKMENT: BROWN, GRAY, CLAYEY FINE TO COARSE SAND	S-25	A-2-6	M	6	LOW SEVERITY FATIGUE CRACKING IN OUTSIDE WHEEL PATH OF WB OSL	471,128	2,598,214
		WB OSL 12.0	WB OSS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-22	A-6	M		LOW SEVERITY BLOCK CRACKING IN BOTH WHEEL PATHS OF WB ISL		



## PAVEMENT INVESTIGATION DATA SHEET

<b>Project:</b>	44648.1.4	<b>County:</b>	CRAVEN	<b>Date:</b>	7/22 - 7/30/2019
<b>TIP:</b>	R-5777C	<b>Route:</b>	US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - WESTBOUND	<b>Notes By:</b>	POWELL, S. H.

[illegible]

Notes:

NB = Northbound  
SB = Southbound  
EB = Eastbound  
WB = Westbound

OSL = Outside Lane  
CL = Center Lane  
ISL = Inside Lane  
MP = Mile Post

COL = Collector Lane  
ACCEL = Acceleration Lane  
DECEL = Deceleration Lane

LTL = Left Turn Lane  
CTL = Center Turn Lane  
RTL = Right Turn Lane

RT = Right  
LT = Left  
(I) = Inside  
(O) = Outside

RT LN = Right Lane  
LT LN = Left Lane

OSS = Outside Shoulder  
ISS = Inside Shoulder  
PS = Paved Shoulder

OES = Outside Earth Shoulder  
EM = Earth Median

FW = From White Line  
FY = From Yellow Line  
AR = Auger Refusal  
NM = Not Measured





Dynamic Cone Penetrometer Data Sheet  
Project: 44648.1.4 (R-5777C), Craven County

Location				Location				Location				Location				Location				Location				Location				Location			
LOCATION 1 WB ISS				LOCATION 1 WB OSL				LOCATION 1 WB OSS				LOCATION 2 WB OES				LOCATION 3 WB EM				LOCATION 4 WB OES				LOCATION 5 WB OES				LOCATION 6 WB EM			
Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date		
SG	7/22/2019			ABC	7/22/2019			ABC	7/22/2019			ESG	7/22/2019			ESG	7/22/2019			ESG	7/22/2019			ESG	7/22/2019			ESG	7/22/2019		
Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Cut			Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Grade		
Subgrade	A-6			Subgrade	A-2-4			Subgrade	A-2-4			Subgrade	A-6			Subgrade	A-6			Subgrade	A-2-4			Subgrade	A-7-6			Subgrade	A-2-6		
Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM			
1.8				0.8				0.5	8.4			2.3				1.9				2.3				2.0				1.6			
2.8				1.1				1.0	8.5			4.6				4.0				5.1				3.6				3.5			
6.1				1.3				1.4	8.6			7.1				5.7				9.5				5.2				6.1			
10.3				1.6				1.8	8.66			9.4				7.4				13.2				7.0				10.3			
15.2				1.7				1.9	8.74			12.1				9.4				15.6				8.6				16.4			
20.0				2.0				2.3	8.8			15.6				11.9				18.5				10.4				21.3			
23.2				2.2				2.6	8.9			19.5				14.7				21.0				12.7				27.1			
25.4				2.4				2.9	22.0			23.2				17.8				23.8				14.8				31.9			
27.5				2.6				3.1	22.1			26.8				20.5				26.7				16.9				36.0			
29.8				2.8				3.2	22.2			32.5				22.9				29.9				19.5				37.2			
32.2				3.0				3.4	22.4			40.2				24.0				33.8				22.3				39.8			
34.6				3.1				3.6	Auger Refual			46.1				25.3				39.5				25.6				43.2			
36.9				3.2				3.9				50.7				27.0				43.3				29.6				46.5			
39.7				3.4				4.0				54.5				28.9				45.2				35.0				49.4			
42.4				3.5				4.2				57.9				31.3				47.1				43.5				52.2			
44.3				3.7				4.4				60.9				34.5				49.2				49.7				54.7			
46.0				3.8				4.5				64.0				37.7				50.9				54.5				57.1			
47.6				3.9				4.8				66.9				40.9				53.0				57.8				60.2			
49.5				4.0				4.9				69.6				43.8				56.4				60.8				62.5			
51.7				4.2				4.94				72.3				47.1				60.3				63.3				64.6			
54.2				4.3				4.98				74.8				50.7				64.1				66.3				66.6			
56.8				4.4				5.02				77.3				54.3				67.3				69.7				68.8			
59.2				4.5				5.06				79.5				57.8				70.2				73.0				70.7			
61.5				4.6				5.1				81.5				60.9				74.0				76.1				73.0			
63.6				4.8				5.2				83.5				63.4				78.6				78.8				74.8			
65.5				4.9				5.3				85.3				66.1				82.9				83.0				76.4			
67.7				5.0				5.5				87.2				68.8				86.8				86.8				78.1			
69.5				5.1				5.6				88.8				71.5				90.3				89.9				79.6			
71.4				5.2				5.7				90.7				74.0				93.5				93.0				81.4			
73.6				5.3				5.8				92.3				76.4				96.3				95.9				82.7			
76.0				5.4				5.9				94.1				79.0				99.7				98.7				84.3			
78.1				5.5				6.0				95.7				81.2				103.3				101.8				85.8			
80.2				5.9				6.1				97.2				83.4				106.5				104.7				87.3			
82.1				6.0				6.2				98.8				85.6											88.7				
84.1				6.1				6.3				100.4				87.6											90.0				
85.7				6.2				6.4				102.1				89.8											91.0				
87.5				6.3				6.5							91.9												92.2				
88.9				6.4				6.6							93.9												93.5				
90.5				6.46				6.7							95.9												94.4				
92.1				6.52				6.8							97.7												95.8				
93.6				6.58				6.9							101.2												97.3				
95.0				6.64				7.0							103.0												99.3				
96.5				6.7				7.1							104.7												100.7				
97.7				6.8				7.2							106.4												101.8				
99.1				6.86				7.26							108.4												103.2				
100.2				6.94				7.32																			104.6				
101.7				7.0				7.38																							
103.0				7.1				7.44																							
104.5				27.6				7.50																							
105.9				28.0				7.54																							
107.2				28.1				7.58																							
108.4				28.3				7.62																							
109.9				28.4				7.66																							
111.2				28.7				7.7																							
112.3				Auger Refual				7.76																							
								7.82																							
								7.88																							
								7.9																							
								8.0																							
								8.1																							
								8.2																							
								8.3																							

**NOTES:**  
SG - Subgrade  
SS - Stabilized Subgrade  
CTBC - Cement Treated Base Course  
ABC - Aggregate Base Course  
ESG - Estimated Subgrade (DCP blows reported from approximately 1 ft below existing ground surface)



Dynamic Cone Penetrometer Data Sheet  
Project: 44648.1.4 (R-5777C), Craven County

Location				Location				Location				Location				Location				Location				Location				Location															
LOCATION 8 WB ISL				LOCATION 8 OSS				LOCATION 9 WB OES				LOCATION 10 WB EM				LOCATION 11 WB OES				LOCATION 12 WB EM				LOCATION 13 WB OES				LOCATION 14 WB EM				LOCATION 15 WB ISS				LOCATION 15 WB OSL							
Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date									
SG		7/22/2019		SG		7/22/2019		ESG		7/22/2019		ESG		7/22/2019		ESG		7/22/2019		EGS		7/22/2019		EGS		7/22/2019		SG		7/22/2019		SG		7/22/2019									
Cut/Fill		Grade		Cut/Fill		Grade		Cut/Fill		Grade		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill									
Subgrade		A-6		Subgrade		A-6		Subgrade		A-2-4		Subgrade		A-2-4		Subgrade		A-2-6		Subgrade		N/M		Subgrade		A-2-6		Subgrade		A-6		Subgrade		A-2-4		Subgrade		A-2-4					
Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM			
3.9				2.4				2.1				0.9	108.1			3.7				0.8				4.5				1.7				0.7	32.8			2.0	15.1						
8.0				3.6				3.5				1.9				6.7				1.6				7.2				3.8				1.3	33.5			3.0	15.2						
11.8				4.8				4.9				2.7				9.7				2.5				10.0				6.1				2.0	34.3			3.4	15.4						
18.4				5.7				6.2				3.5				13.2				3.6				12.7				8.7				2.5	35.1			3.9	15.5						
24.6				6.6				7.6				4.4				17.4				4.9				15.1				11.6				2.9	36.4			4.1	Auger 23.1 cm						
29.8				7.8				9.3				5.2				21.0				5.7				17.7				14.2				3.5	37.4			4.6							
34.6				8.8				11.8				5.8				23.8				7.1				20.2				16.2				4.0	38.7			4.9							
39.0				10.1				14.3				6.3				25.6				8.9				22.8				17.6				4.3	40.3			5.3		2.1					
42.9				11.5				16.1				6.9				27.5				10.8				25.2				18.9				4.8	41.7			5.5	5.5						
46.3				13.6				17.4				7.4				29.3				13.0				30.0				20.1				5.4	44.1			5.7	9.7						
49.2				16.1				18.7				8.0				31.5				16.2				36.0				21.3				5.7	48.0			6.1	12.7						
52.0				18.5				20.0				8.2				34.1				19.1				40.2				22.6				6.2	49.5			6.3	14.9						
54.4				21.0				21.1				8.6				36.5				23.9				42.4				23.8				6.5	50.9			6.6	17.0						
56.6				23.9				22.4				9.0				39.2				26.8				43.8				24.9				7.0	52.1			6.9	19.2						
58.9				28.8				24.0				9.3				43.1				28.0				45.2				26.0				7.3	53.7			7.2	21.2						
61.3				44.1				25.8				9.8				47.9				29.0				46.5				27.1				7.8	56.1			7.4	22.7						
63.6				50.7				28.6				10.1				49.5				30.3				47.9				28.0				8.2	59.6			7.5	24.0						
65.7				55.3				32.4				10.6				50.7				32.9				49.1				29.1				8.6	62.8			7.6	25.3						
68.0				58.9				35.9				11.1				52.0				34.1				50.6				30.1				9.1	65.6			7.8	26.5						
69.8				61.9				38.7				11.6				53.1				35.3				51.7				30.9				9.5	68.0			7.9	27.9						
71.7				64.7				41.5				12.2				54.4				36.6				53.0				31.9				10.0	70.1			8.0	29.3						
73.5				67.2				44.2				12.7				55.7				37.8				54.2				32.8				10.5	72.0			8.2	30.6						
75.3				69.6				46.7				13.5				57.0				39.7				55.4				33.7				11.0	73.9			8.3	32.0						
76.9				71.7				49.6				13.9				58.2				41.0				56.6				34.8				11.4	75.7			8.5	33.6						
78.6				73.8				51.9				14.7				59.6				43.1				57.9				36.1				11.8	77.3			8.6	35.1						
80.0				75.8				54.1				15.0				61.1				47.4				59.3				37.7				12.5	78.8			8.8	36.5						
81.6				77.7				56.3				15.9				62.8				50.8				60.6				39.5				13.0	80.2			9.0	37.8						
83.1				79.4				58.7				16.9				65.1				55.3				61.8				41.9				13.6	81.4			9.1	38.9						
84.5				81.0				61.0				17.9				68.7				57.7				63.3				44.5				14.0	82.8			9.3	40.3						
86.2				82.7				63.2				19.0				72.7				59.2				65.6				47.4				14.5	83.9			9.4	41.7						
				84.3				65.5				20.1				76.9				63.3				68.6				50.2				15.0	84.9			9.6	43.0						
				85.9				67.9				21.6				80.7				65.2				71.8				53.0				15.5	86.3			9.9	44.1						
				87.4				70.2				23.0				83.7				66.8				74.2				55.7				15.9	87.6			10.1	45.6						
				89.0				72.4				24.7				86.2				68.8				75.9				58.3				16.3	88.9			10.4	47.0						

**NOTES:**  
SG - Subgrade  
SS - Stabilized Subgrade  
CTBC - Cement Treated Base Course  
ABC - Aggregate Base Course  
ESG - Estimated Subgrade (DCP blows reported from approximately 1 ft below existing ground surface)



Dynamic Cone Penetrometer Data Sheet  
Project: 44648.1.4 (R-5777C), Craven County

Location				Location				Location				Location				Location				Location				Location				Location				Location							
LOCATION 15 WB OSS				LOCATION 16 WB OES				LOCATION 17 WB EM				LOCATION 18 WB OES				LOCATION 19 WB OES				LOCATION 20 WB EM				LOCATION 21 WB OES				LOCATION 22 WB EM				LOCATION 23 WB ISS				LOCATION 23 WB ISL			
Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date					
SG		7/22/2019		ESG		7/22/2019		ESG		7/22/2019		ESG		7/22/2019		ESG		7/22/2019		ESG		7/23/2019		ESG		7/23/2019		SG		7/23/2019		SG		7/23/2019					
Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill					
Subgrade		A-2-4		Subgrade		A-2-4		Subgrade		A-2-4		Subgrade		A-2-4		Subgrade		A-2-4		Subgrade		A-2-4		Subgrade		A-6		Subgrade		A-4		Subgrade		A-4					
Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM			
1.4	41.5			2.4				1.5	65.7			1.4				2.7				0.9				2.5	76.0			1.3				1.4	111.3			0.6	15.1		
2.3	44.0			5.6				3.1	67.7			2.7				4.4				2.5				3.4	78.7			3.0				2.9				1.0	15.3		
3.3	46.7			8.7				4.5	69.8			3.9				6.8				3.7				7.2	81.2			5.3				4.2				1.6	15.5		
3.9	49.3			11.3				5.7	71.4			6.5				9.4				5.1				9.5	83.6			7.7				5.5				1.9	15.7		
4.7	51.9			13.1				7.0	72.7			12.8				11.5				6.8				11.1	85.9			10.1				6.6				2.2	15.9		
5.5	54.8			14.6				8.3	73.8			20.6				12.8				8.3				12.6	88.1			12.0				7.9				2.4	16.1		
6.2	57.2			15.8				9.5	74.9			28.0				14.7				9.9				13.7	90.3			13.7				9.0				2.8	16.3		
6.9	59.8			17.4				10.8	76.1			30.8				16.2				11.6				14.6	92.4			15.4				10.1				3.0	16.5		
7.4	62.0			19.1				12.2	77.2			35.3				17.7				13.0				15.6	94.5			17.0				11.3				3.3	16.7		
7.9	64.0			20.8				13.5	78.4			37.8				18.8				15.1				16.3	96.7			18.8				12.7				3.5	16.9		
8.2	66.1			22.1				14.6	79.6			39.6				20.1				17.9				17.2	98.9			20.7				13.9				3.8	17.2		
8.5	68.2			23.4				15.5	80.7			41.8				21.4				21.2				18.1	101.0			22.3				15.4				4.0	17.4		
8.9	70.3			25.0				16.7	82.0			44.4				22.8				23.5				19.1			24.0				16.5				4.3	17.7			
9.2	72.4			26.7				17.5	83.5			47.8				24.1				25.7				19.8			25.2				17.5				4.6	17.9			
9.5	73.8			28.1				18.3	84.9			51.3				25.4				28.0				20.6			26.5				18.5				4.8	18.2			
9.9	75.3			29.5				19.2	86.3			55.0				26.8				31.0				21.3			27.6				19.7				5.0	18.4			
10.2	77.5			31.0				20.3	87.7			58.8				28.1				33.7				21.9			28.6				21.0				5.4	18.6			
10.4	79.9			32.8				21.2	89.0			62.2				29.6				35.4				22.5			29.6				22.3				5.6	18.8			
10.8	81.1			35.1				21.8	90.2			65.5				31.7				37.2				23.1			31.5				23.3				5.8	19.0			
11.1	82.8			37.7				22.8	91.6			68.2				33.7				38.4				23.8			33.0				24.3				6.0	19.2			
11.5	84.6			40.3				23.6	92.7			69.7				35.2				40.5				24.4			34.8				25.7				6.2	Auger 11.8 cm			
11.9	86.2			42.4				24.4	93.8			70.9				37.3				42.5				25.2			36.3				27.2				6.4				
12.3	87.7			44.5				25.2	95.3			72.1				39.1				44.6				26.0			37.3				28.6				6.6				
12.7	89.1			46.1				26.3	96.6			73.0				40.6				47.3				26.8			38.3				30.0				6.8	2.9			
13.1	90.7			47.4				27.3	98.0			74.1				42.3				51.4				27.6			39.3				31.6				7.0	4.0			
13.5	92.2			48.5				28.6	99.2			75.2				44.8				54.4				28.3			40.4				33.7				7.2	5.4			
13.8	93.9			49.9				29.5	100.5			76.2				46.4				57.3				28.8			41.7				36.2				7.4	7.3			
14.2	95.3			51.9				30.5	101.6			77.3				47.7				59.4				29.7			43.1				38.8				7.6	10.6			
14.6	96.7			54.3				32.0	102.8			78.3				48.6				61.1				30.3			45.1				41.2				7.9	14.0			
14.8	98.3			56.3				33.5	104.0			79.5				49.9				63.1				31.0			48.2				43.3				8.1	17.3			
15.1	99.8			58.1				34.9				80.6				51.3				65.1				31.5			51.3				45.3				8.4	20.3			
15.6	101.2			59.9				36.4				81.9				52.9				66.6				32.3			55.1				47.6				8.6	22.6			
16.0	102.7			61.5				37.8				83.6				54.4				67.6																			



Dynamic Cone Penetrometer Data Sheet  
Project: 44648.1.4 (R-5777C), Craven County

Location				Location				Location				Location				Location				Location				Location				Location				Location				Location				Location				Location			
LOCATION 23 WB OSS				LOCATION 24 WB OES				LOCATION 25 WB EM				LOCATION 26 WB OES				LOCATION 27 WB EM				LOCATION 28 WB OES				LOCATION 29 WB ISS				LOCATION 29 WB OSL				LOCATION 29 WB OSS				LOCATION 30 WB OES											
Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date									
SG		7/23/2019		ESG		7/23/2019		ESG		7/23/2019		ESG		7/23/2019		ESG		7/23/2019		SG		7/23/2019		SG		7/23/2019		SG		7/23/2019		ESG		7/23/2019		ESG		7/23/2019									
Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill									
Subgrade		A-2-4		Subgrade		A-6		Subgrade		A-2-4		Subgrade		A-2-4		Subgrade		A-6		Subgrade		A-4		Subgrade		A-2-4		Subgrade		A-2-4		Subgrade		A-2-4		Subgrade		A-2-4									
Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM			
1.0	31.3	92.7		4.2				1.7	95.0			1.2				0.7				0.5	96.9			1.4	108.4			0.3	4.7	37.7		1.8	53.5			1.3	92.1										
2.2	32.0	94.6		5.8				3.8	97.2			2.9				1.6				1.5	98.2			2.5	109.5			0.8	5.6	38.3		2.6	54.0			2.6	93.3										
3.3	32.6	96.7		7.4				5.9	99.2			4.7				2.8				2.2	99.4			3.7				1.2	6.7	39.1		3.3	54.3			3.8	94.4										
4.0	33.2	99.1		9.0				7.7	101.2			6.8				4.0				3.2	100.7			5.0				1.5	8.0	39.7		3.8	54.6			4.8	95.5										
4.7	33.8	101.3		10.5				9.5	103.2			9.5				5.2				4.1	101.8			6.6				2.0	9.9	40.4		4.3	54.9			6.0	96.8										
4.9	34.3	103.8		11.8				11.1	105.0			13.0				6.4				5.1	103.0			9.2				2.2	11.3	41.1		4.8	55.1			7.1	98.4										
5.4	35.0	106.0		13.1				12.5	106.7			16.9				7.9				6.1	104.2			13.3				2.7	12.5	41.7		5.3	55.5			8.1	100.0										
5.8	35.7	107.9		14.3				14.0	108.2			19.6				9.6				7.0	105.4			18.0				2.8	13.4	42.3		5.7	55.9			9.3	101.3										
6.2	36.0	110.0		15.7				15.6				22.2				11.4				8.0	106.5			21.9				3.0	14.1	42.9		6.3	56.2			10.3	102.6										
6.4	36.7	112.0		16.7				17.3				26.6				13.4				9.2	107.7			25.1				3.1	14.8	43.4		6.7	56.8			11.4	103.8										
6.7	37.4			18.0				18.8				28.4				16.0				9.9	108.8			28.4				3.3	15.5	44.3		7.2	57.0			12.3											
7.2	38.1			19.2				20.5				30.6				20.7				10.6	110.0			31.3				3.6	16.1	45.0		7.9	57.5			13.4											
7.7	38.9			20.5				21.3				34.5				28.8				11.5				33.5				3.7	16.8	45.8		8.3	57.9			14.4											
8.1	39.6			21.6				22.6				39.3				34.7				12.3				36.0				4.0	17.3	46.6		8.9	58.3			15.3											
8.6	40.5			22.6				23.8				43.7				36.8				13.3				39.7				4.1	17.8	47.5		9.2	58.8			16.1											
8.9	41.4			24.0				25.2				47.0				39.0				14.2				42.1				4.2	18.1	48.6		9.8	59.0			17.1											
9.4	42.5			25.6				26.3				50.6				42.0				15.4				43.1				4.4	18.4	49.8		10.5	59.7			18.0											
9.7	43.7			28.2				27.4				53.8				45.2				16.7				44.0				4.6	18.7	51.2		10.9	59.9			18.9											
9.8	44.9			31.5				28.6				56.9				49.2				18.3				44.8				4.7	19.0	52.7		11.6	60.5			20.1											
10.3	46.8			35.0				29.7				59.9				53.4				19.5				45.7				4.8	19.2	54.3		12.1	60.9			21.5											
10.7	48.6			39.0				30.7				63.0				55.9				21.0				46.3				4.9	19.4	56.1		12.5	61.6			23.4											
11.3	50.5			42.7				31.7				65.7				58.2				22.1				47.0				4.98	19.7	58.5		13.3	62.1			25.5											
11.7	52.3			45.6				32.6				68.4				60.4				23.1				47.8				5.06	20.0	61.2		13.9	63.0			26.8											
12.1	53.7			49.1				33.5				71.1				63.0				24.0				48.6				5.14	20.2	64.2		14.6	63.7			27.8											
12.4	55.3			53.5				34.4				73.4				65.4				25.0				49.6				5.2	20.4	67.5		15.3	64.6			28.6											
12.8	57.1			57.1				35.4				75.6				68.4				26.1				50.8				5.3	20.7	70.5		16.0	65.6			29.5											
13.3	58.8			60.0				36.5				77.7				71.5				27.3				52.3				5.34	20.9	73.4		16.6	66.7			30.4											
13.7	60.5			62.6				37.5				79.9				74.0				28.7				53.9				5.38	21.1	76.0		17.3	68.0			31.2											
14.1	62.4			64.9				38.5				82.0				76.7				30.2				54.9				5.42	21.3	78.4		18.1	69.3			32.0											
14.5	64.0			67.1				39.4				84.1				79.4				32.0				55.8				5.46	21.5	80.6		18.8	71.5			32.9											
14.9	65.3			69.1				40.3				86.1				81.9				34.0				56.4				5.5	21.7	82.2		19.6	74.6			33.8											
15.3	66.3			71.3				41.2				88.3				84.6				37.2				57.1				5.6	21.9			20.2	77.4			34.5											
15.7	67.5			73.3				41.9				90.4				87.0				40.6				57.9				5.7	22.1			21.0	80.3			35.2											
16.1	68.8			75.1				42.9				92.3				89.2				43.6				58.7				5.8	22.3			21.7	83.0			36.2											



Dynamic Cone Penetrometer Data Sheet  
Project: 44648.1.4 (R-5777C), Craven County

Location				Location				Location				Location				Location				Location				Location				Location				Location				Location				Location			
LOCATION 31 WB EM				LOCATION 32 WB OES				LOCATION 33 WB OES				LOCATION 34 WB EM				LOCATION 35 WB OES				LOCATION 36 WB EM				LOCATION 37 WB ISS				LOCATION 37 WB ISL				LOCATION 37 WB OSS				LOCATION 38 WB OES							
Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date						
ESG	7/23/2019			ESG	7/23/2019			ESG	7/23/2019			ESG	7/23/2019			ESG	7/23/2019			ESG	7/23/2019			SG	7/23/2019			SG	7/23/2019			SG	7/23/2019			ESG	7/23/2019						
Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Grade			Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Grade						
Subgrade	A-2-4			Subgrade	A-2-4			Subgrade	A-2-4			Subgrade	A-6			Subgrade	A-6			Subgrade	A-4			Subgrade	A-4			Subgrade	A-2-4			Subgrade	A-2-4			Subgrade	A-6						
Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM			
2.2				1.3	54.7			1.2	82.3			2.1				2.6				3.0				1.4	64.5			1.2	21.4	50.4		4.0	62.3			1.8							
5.3				2.4	55.7			2.0	84.5			4.5				5.0				5.5				3.8	65.7			2.1	21.7	50.9		5.4	62.9			3.6							
8.4				3.3	56.9			3.1	86.4			6.6				8.1				8.7				6.7	67.0			2.8	21.9	51.4		7.0	63.6			6.0							
10.7				4.3	57.9			4.3	88.5			8.5				12.4				12.3				7.9	68.3			3.5	22.2	51.9		8.2	64.2			8.1							
13.2				5.4	60.6			5.4	90.2			10.6				14.0				18.3				9.1	70.2			4.2	22.4	52.5		9.7	64.7			10.0							
16.1				6.6	62.4			6.6	92.1			12.3				15.1				31.2				10.3	72.3			4.8	22.7	52.9		11.2	65.5			11.7							
18.7				7.7	63.7			7.7	93.8			14.6				16.0				36.7				11.5	74.4			5.4	22.9	53.3		12.7	66.3			13.4							
21.0				8.7	65.3			8.7	95.3			16.7				16.9				39.7				12.5	77.2			6.1	23.2	53.9		14.0	67.1			15.5							
24.0				9.6	67.3			9.5	96.9			18.7				17.6				41.9				13.6	79.5			6.7	23.5	54.3		15.7	68.0			16.9							
26.4				10.4	69.0			10.3	98.2			20.8				18.4				44.2				14.6	81.8			7.4	23.9	55.0		17.3	69.1			18.1							
28.2				11.3	70.6			11.3	99.5			23.0				19.2				47.9				15.7	83.9			8.0	24.2	55.6		19.0	70.2			19.0							
29.5				12.0	72.7			12.0	101.0			24.4				19.8				51.3				16.7	86.0			8.5	24.5	56.2		21.7	71.6			20.0							
31.6				12.8	75.0			12.8	102.3			26.5				22.7				54.1				17.9	87.8			9.1	25.2	56.9		22.5	73.6			21.2							
33.7				13.5	76.9			13.5	103.7			29.9				25.1				59.3				19.3	89.8			9.8	25.6	57.7		24.1	75.9			22.3							
35.1				14.2	78.5			14.0				31.3				28.5				68.1				21.0	91.6			10.3	26.1	58.5		25.9	78.4			23.3							
36.2				14.9	80.3			15.6				32.3				30.5				78.7				23.4	93.3			10.7	26.5	59.4		28.0	80.9			24.3							
37.6				15.7	81.8			17.4				33.4				33.4				87.2				26.4	94.8			11.2	27.0	60.5		30.4	83.0			25.2							
38.7				16.4	83.2			18.0				34.6				34.4				93.7				28.6	96.2			11.6	27.4	61.8		33.2	85.2			26.3							
39.7				17.1	84.5			18.7				35.7				38.5				98.5				29.7	97.7			12.0	28.0	63.5		35.2	87.1			27.6							
41.3				18.1	86.3			19.6				36.8				43.7								30.8	99.2			12.4	28.8	65.7		36.2	88.9			29.1							
42.4				19.0	87.9			20.3				38.1				49.8								32.2	100.7			12.7	29.3	68.3		37.0	90.7			30.2							
43.6				20.0	90.0			20.8				39.6				58.9								33.4	102.0			13.3	30.0	71.0		37.7	92.5			32.0							
44.4				20.7	92.0			21.3				41.0				67.0								34.7	103.6			13.5	30.7	73.2		38.5	94.2			34.4							
45.1				21.6	93.1			21.9				42.2				74.0								36.0	105.3			13.8	31.3	75.3		39.2	96.0			37.5							
46.0				22.3	93.8			22.5				43.1				79.1								37.4	107.2			14.0	31.8	77.6		40.1	97.6			41.4							
46.9				23.2	94.3			23.1				44.2				83.1								39.0	108.9			14.2	32.5	79.9		41.0	99.4			45.7							
48.0				24.1	95.3			23.8				45.3				87.2								41.1	110.7			14.4	33.1	82.2		42.0	101.0			48.0							
49.2				25.0	96.2			24.5				46.5				90.8								43.2				14.7	33.7	84.6		42.8	102.7			51.7							
50.7				25.8	97.1			25.2				47.6				93.8								44.5				14.9	34.5	86.9		43.5	104.3			55.1							
52.6				26.7	98.0			25.8				48.8				96.6								45.2				15.1	35.1	89.0		44.3	105.9			57.4							
56.0				27.3	99.1																																						



Dynamic Cone Penetrometer Data Sheet  
Project: 44648.1.4 (R-5777C), Craven County

Location				Location				Location				Location				Location				Location				Location				Location				Location				Location							
LOCATION 39 WB EM				LOCATION 40 WB OES				LOCATION 41 WB OES				LOCATION 42 WB EM				LOCATION 43 WB OES				LOCATION 44 WB ISS				LOCATION 44 WB OSL				LOCATION 44 WB OSS				LOCATION 45 WB EM				LOCATION 46 WB OES							
Datum	Date	Datum	Date	Datum	Date	Datum	Date	Datum	Date	Datum	Date	Datum	Date	Datum	Date	Datum	Date	Datum	Date	Datum	Date	Datum	Date	Datum	Date	Datum	Date	Datum	Date	Datum	Date	Datum	Date	Datum	Date								
ESG	7/23/2019	ESG	7/23/2019	ESG	7/25/2019	ESG	7/25/2019	ESG	7/25/2019	ESG	7/25/2019	SG	7/25/2019	SG	7/25/2019	SG	7/25/2019	SG	7/25/2019	SG	7/25/2019	SG	7/25/2019	SG	7/25/2019	SG	7/25/2019	ESG	7/25/2019	ESG	7/25/2019	ESG	7/25/2019	ESG	7/25/2019								
Cut/Fill	Fill	Cut/Fill	Fill	Cut/Fill	Fill	Cut/Fill	Fill	Cut/Fill	Grade	Cut/Fill	Fill	Cut/Fill	Fill	Cut/Fill	Fill	Cut/Fill	Fill	Cut/Fill	Fill	Cut/Fill	Fill	Cut/Fill	Fill	Cut/Fill	Fill	Cut/Fill	Fill	Cut/Fill	Fill	Cut/Fill	Fill	Cut/Fill	Fill	Cut/Fill	Fill								
Subgrade	A-2-4	Subgrade	A-6	Subgrade	A-6	Subgrade	A-6	Subgrade	A-2-4	Subgrade	A-2-4	Subgrade	A-2-4	Subgrade	A-2-4	Subgrade	A-6	Subgrade	A-6	Subgrade	A-6	Subgrade	A-6	Subgrade	A-6	Subgrade	A-6	Subgrade	A-2-6	Subgrade	A-2-6	Subgrade	A-2-4	Subgrade	A-2-4								
Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM			
2.0				3.0				2.1				1.8				3.6				2.8				3.8	63.3			1.5	81.0			2.0											
4.6				7.4				4.4				4.7				4.9				4.2				4.7	64.5			2.4	82.6			4.7											
7.8				16.7				6.6				7.1				6.3				5.1				5.3	65.6			3.2	83.6			8.3											
11.8				23.3				9.3				9.5				7.8				6.0				5.8	66.6			3.7	85.0			12.0											
14.7				27.2				12.5				11.7				9.3				6.9				6.2	67.7			4.3	86.1			15.2											
16.6				29.1				16.6				14.0				10.8				8.0				6.7	68.8			4.7	87.6			17.4											
18.0				31.2				20.3				16.5				12.3				9.3				7.0	69.8			5.2	89.2			19.1											
19.2				33.7				21.7				18.9				14.4				10.6				7.4	70.8			5.5	90.4			20.6											
20.4				37.5				23.7				21.9				16.0				12.2				7.8	71.9			6.0	92.2			21.8											
21.9				41.6				26.5				27.7				17.5				14.1				8.2	72.8			6.4	93.6			22.5											
23.1				44.3				30.3				31.6				18.6				16.2				8.6	73.8			6.9	95.1			23.6											
24.3				46.5				32.3				34.2				20.0				18.3				9.0	74.9			7.1	96.7			24.4											
25.5				48.7				35.0				37.2				21.6				19.6				9.4	76.0			7.5	98.2			25.2											
26.7				51.4				40.5				40.6				23.7				20.9				9.7	77.2			7.7	99.6			26.1											
27.9				54.3				44.5				44.2				27.3				22.0				10.0	78.3			8.2	101.1			27.3											
29.3				57.5				47.8				48.0				31.6				23.2				10.4	79.5			8.7	102.6			28.5											
31.0				60.3				50.8				51.1				35.0				24.6				10.7	80.7			9.1	104.2			29.7											
33.7				62.6				53.5				53.9				39.0				25.9				11.0	81.9			9.4	106.0			31.0											
37.8				64.9				55.9				56.4				42.2				27.2				11.4	83.0			9.9	107.5			32.5											
42.4				67.1				58.1				59.1				43.4				28.7				11.7	84.1			10.3			34.3												
46.4				69.0				60.1				61.6				44.5				30.7				12.0	85.3			10.8			36.0												
49.6				71.0				62.1				64.1				45.3				32.8				12.4	86.2			11.2			37.6												
52.6				72.6				64.0				66.4				46.5				34.7				12.8	87.1			11.6			39.5												
55.0				74.0				65.7				68.5				48.7				36.7				13.1	88.0			12.1			41.4												
57.4				75.8				67.5				70.7				51.5				39.3				13.5	89.1			12.6			43.7												
59.9				77.1				69.3				73.0				54.1				41.4				13.9	90.1			13.2			47.0												
62.2				78.8				70.8				75.1				57.1				43.4				14.3	90.9			13.8			51.4												
64.4				80.7				72.5				77.4				60.4				45.8				14.9	91.9			14.3			53.9												
66.6				82.6				74.1				79.7				63.3				48.0				15.4	92.9			15.0			55.7												
68.3				84.3				75.6				82.0				65.7				50.8				15.7	93.8			15.6			57.5												
70.0				86.0				77.3				84.4				69.1				53.2				16.3	94.8			16.2			60.1												
71.8				87.6				78.8				86.9				72.0				55.4				16.8	95.8			16.9			62.5												
73.5				89.1				80.3				89.1				74.4				58.0				17.5	97.1			17.9			64.8												
75.1				90.7				81.6				91.3				77.8				60.3				18.1	98.1			18.9			67.1												
76.8				92.2				82.9				93.5				81.4				62.0				18.9	99.4			20.0			69.6												
78.3				93.9				84.3				95.6			</																												



Dynamic Cone Penetrometer Data Sheet  
Project: 44648.1.4 (R-5777C), Craven County



Location				Location				Location				Location				Location				Location				Location				Location											
LOCATION 47 WB EM				LOCATION 48 WB OES				LOCATION 49 WB EM				LOCATION 50 WB OES				LOCATION 51 WB EM				LOCATION 52 WB ISS				LOCATION 52 WB OSL				LOCATION 52 WB OSS				LOCATION 53 WB OES				LOCATION 54 WB EM			
Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date						
ESG	7/25/2019			ESG	7/25/2019			ESG	7/25/2019			ESG	7/25/2019			SG	7/25/2019			SG	7/25/2019			SG	7/25/2019			SG	7/25/2019			ESG	7/25/2019						
Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Fill						
Subgrade	A-2-4			Subgrade	A-2-4			Subgrade	A-2-6			Subgrade	A-2-4			Subgrade	A-2-6			Subgrade	A-2-6			Subgrade	A-2-4			Subgrade	A-2-4			Subgrade	A-6						
Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM			
3.0				5.4				2.4	70.8			2.0				2.2				2.3	62.2			0.4	1.9	49.0		2.0	69.5			2.6							
5.0				7.7				4.8	71.6			3.0				5.2				3.7	63.6			0.7	2.3	50.1		3.7	70.2			5.0							
6.0				9.7				7.0	72.4			4.2				9.3				5.3	65.3			1.0	2.9	51.3		5.1	71.0			7.1							
7.2				11.2				8.7	73.2			5.5				14.4				6.8	67.2			1.3	3.6	52.9		6.2	72.1			9.1							
8.4				12.8				10.0	74.0			6.8				19.5				8.2	69.2			1.6	4.3	54.7		7.6	73.0			11.0							
9.7				14.4				11.0	74.8			8.2				24.2				9.5	71.1			1.8	5.3	56.7		8.8	73.8			12.7							
11.2				16.1				12.0	75.6			9.7				26.4				10.7	72.9			2.0	6.4	58.7		9.9	74.8			14.3							
12.5				18.0				13.0	76.4			11.2				28.8				12.3	74.7			2.2	7.5	60.5		10.9	76.0			16.1							
14.8				19.8				14.0	77.4			12.7				30.8				14.0	76.5			2.4	8.4	61.8		12.2	77.2			17.7							
17.5				21.3				15.4	78.3			13.8				33.2				15.3	78.1			2.5	9.1	63.1		13.2	78.5			19.7							
20.8				22.8				17.0	79.0			15.1				34.6				16.2	79.8			2.6	9.7	64.5		14.5	80.3			21.7							
23.9				24.3				18.9	79.9			16.4				36.3				17.4	81.3			2.8	10.4	65.7		15.8	82.4			23.1							
27.1				25.7				20.4	80.7			17.7				37.7				18.8	83.3			2.9	10.9	67.2		17.2	84.7			24.7							
30.8				27.2				22.1	81.6			19.1				39.6				20.0	85.2			3.0	11.5	68.8		18.5	87.0			26.4							
34.1				28.7				23.6	82.5			20.2				40.8				21.4	87.0			3.1	12.2	70.5		19.5	89.4			27.8							
36.1				30.2				24.7	83.2			21.4				42.1				22.7	89.2			3.2	12.7	72.6		20.5	91.9			29.1							
37.8				31.5				25.7	84.3			22.6				43.4				23.9	91.2			3.3	13.3	74.4		21.6	94.8			30.5							
39.3				32.8				26.7	85.1			23.9				44.6				24.8	93.3			3.4	14.0	76.1		22.6	97.7			31.8							
40.3				34.0				27.4	86.0			25.2				45.9				25.8	95.5			3.5	14.6	77.8		23.5	100.5			33.2							
41.9				35.3				28.3	86.7			26.5				47.1				26.7	97.7			3.7	15.3	79.7		24.6	103.3			34.6							
43.2				36.3				29.0	87.5			27.9				48.6				27.6	100.1			3.8	16.1	81.7		25.4	106.0			36.0							
44.5				37.5				29.8	88.1			29.2				49.7				28.3	102.1			3.9	16.9	83.7		26.4	108.7			37.3							
45.8				38.7				30.5	88.9			30.6				50.9				29.1	104.2			4.0	17.7			27.2	110.9			38.3							
46.8				39.9				31.3	89.6			32.1				52.2				29.7	106.5			4.06	18.8			28.2				39.2							
48.4				41.2				32.4	90.3			34.2				53.4				30.3	108.7			4.14	19.9			29.1				40.6							
49.8				42.9				33.3	91.0			36.3				54.9				30.7	111.1			4.2	21.0			29.9				42.3							
51.1				44.4				34.2	91.8			38.5				56.4				31.2				4.3	22.3			30.6				44.6							
52.5				47.8				35.4	92.6			41.0				57.9				31.8				4.4	23.6			31.6				47.0							
54.0				53.2				36.3	93.5			43.3				59.3				32.5				4.5	24.9			32.3				49.1							
55.8				57.2				37.5	94.4			45.9				60.9				33.0				4.7	25.9			33.2				51.0							
57.9				61.7				38.6	95.3			48.2				62.6				33.6				4.8	26.6			34.3				53.6							
60.7				65.5				39.7	96.4			49.9				63.9				34.2				4.9	27.2			35.6				57.0							
62.9				66.8				40.7	97.6			51.6				65.0				34.9				5.0	28.0			37.0				60.2							
65.8				68.1				41.6	98.8			53.2				66.1				35.5				5.06	28.5			38.0				64.0							
68.5				70.8				42.2	100.4			55.0				67.4				35.9																			



**Dynamic Cone Penetrometer Data Sheet**  
**Project:** 44648.1.4 (R-5777C), Craven County

Location				Location				Location				Location				Location				Location				Location				Location							
LOCATION 55 WB OES				LOCATION 56 WB OES				LOCATION 57 WB EM																											
Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date					
ESG		7/25/2019		ESG		7/25/2019		ESG		7/25/2019																									
Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill				Cut/Fill				Cut/Fill				Cut/Fill				Cut/Fill							
Subgrade		A-6		Subgrade		A-2-6		Subgrade		A-2-6		Subgrade				Subgrade				Subgrade				Subgrade				Subgrade							
Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM			
3.3				1.8				1.8																											
6.2				2.7				3.3																											
8.5				4.2				4.8																											
11.3				6.6				6.4																											
14.2				7.8				8.5																											
16.6				8.4				11.0																											
19.1				9.0				13.4																											
22.0				10.1				17.0																											
24.6				11.2				22.4																											
28.3				12.2				28.2																											
32.0				13.5				31.9																											
35.0				15.3				34.1																											
38.0				18.5				36.2																											
41.4				18.8				38.0																											
43.8				21.6				39.7																											
46.0				23.0				41.0																											
48.3				25.7				42.0																											
50.1				28.8				43.0																											
51.9				30.6				44.4																											
54.2				32.4				47.2																											
56.2				34.4				51.9																											
58.6				36.8				55.7																											
61.3				39.5				59.2																											
64.5				41.5				61.7																											
67.3				43.1				65.4																											
69.1				44.3				67.9																											
70.5				45.3				70.4																											
71.4				46.5				72.8																											
72.4				47.5				75.0																											
73.2				49.5				77.6																											
74.4				51.5				79.5																											
75.1				53.5				81.8																											
76.0				55.3				84.0																											
77.2				56.8				86.1																											
78.1				58.1				88.6																											
79.1				59.6				90.8																											
80.3				61.0				93.3																											
81.6				62.7				95.6																											
83.1				64.3				97.7																											
84.8				66.1				99.9																											
86.9				67.9				102.4																											
89.1				69.8																															
91.4				71.7																															
93.3				73.1																															
95.3				75.2																															
97.3				76.7																															
98.9				78.9																															
100.8				80.9																															
102.8				83.2																															
				85.2																															
				87.9																															
				90.6																															
				93.0																															
				95.6																															
				98.6																															
				101.3																															

**NOTES:**

SG - Subgrade

ABC - Aggregate Base Course

ESG - Estimated Subgrade (DCP blows reported from approximately 1 ft below existing ground surface)

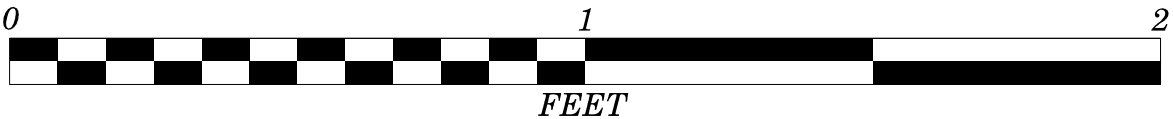
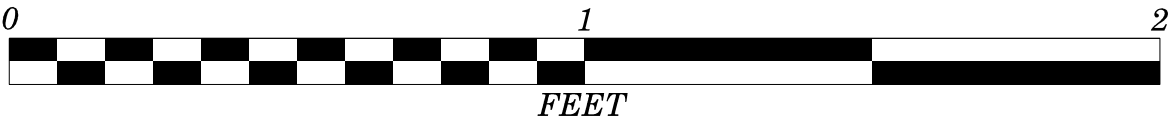
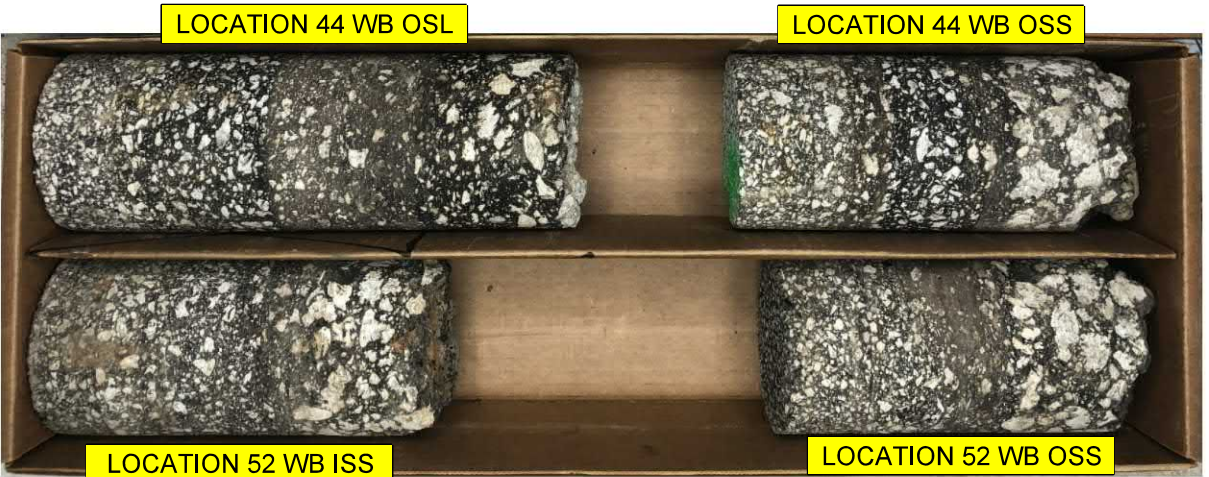
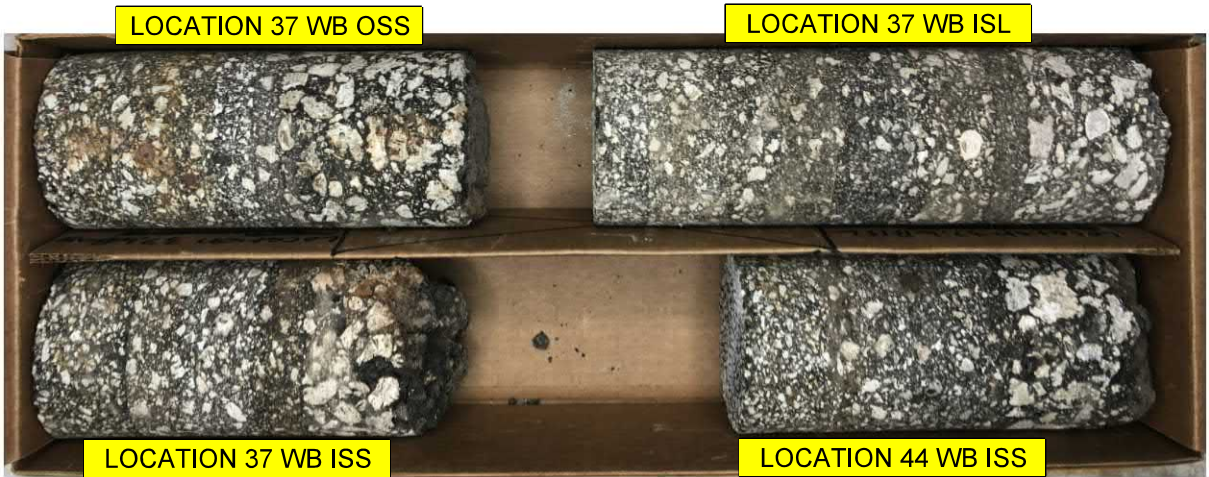
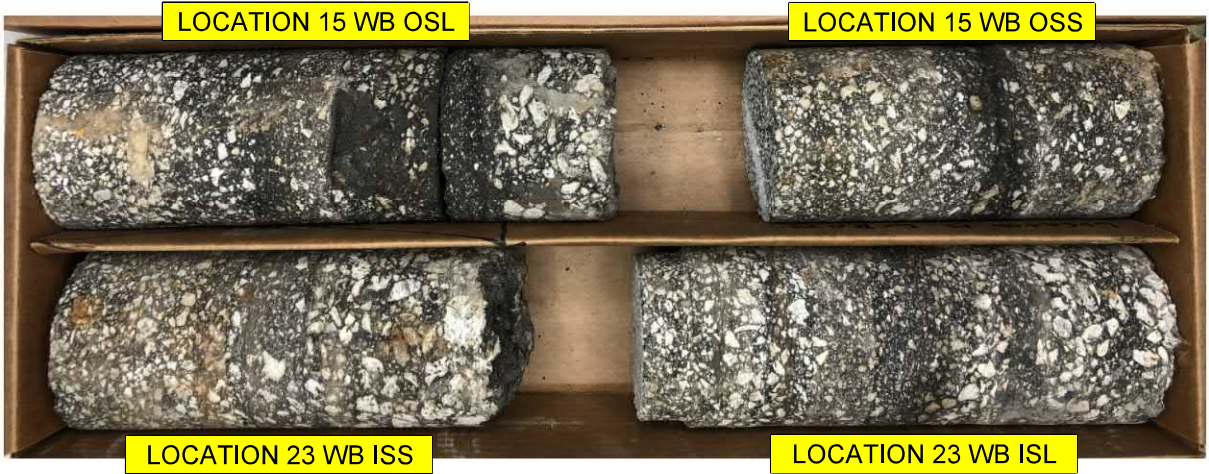
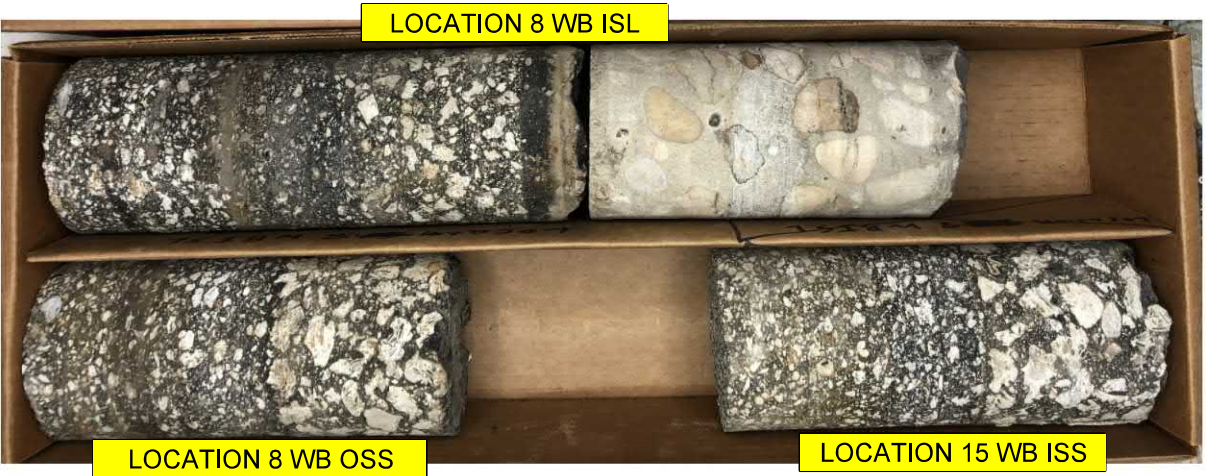
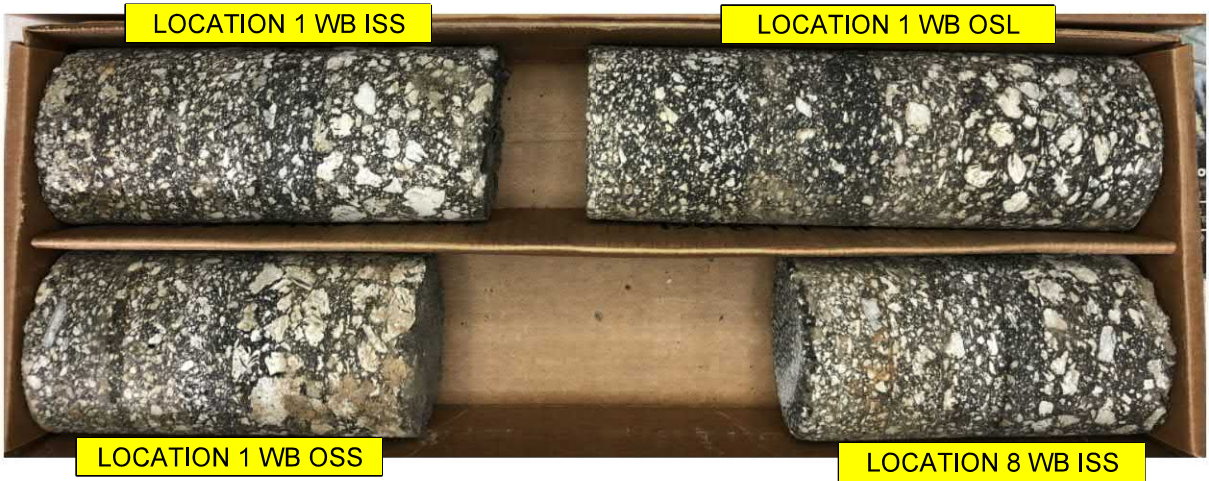
SS - Stabilized Subgrade

CTBC - Cement Treated Base Course



PAVEMENT CORE PHOTOGRAPHS  
US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - WESTBOUND

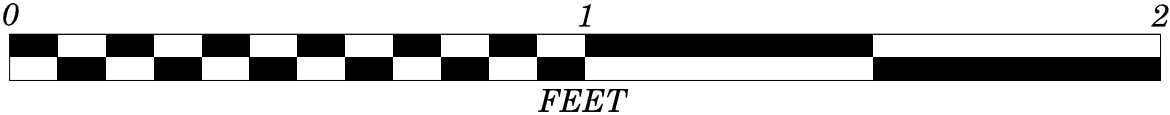
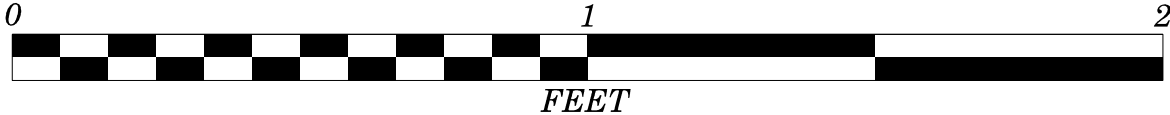
PROJECT REFERENCE NO.	SHEET NO.
R-5777C	49





PAVEMENT CORE PHOTOGRAPHS  
US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - WESTBOUND

PROJECT REFERENCE NO.	SHEET NO.
R-5777C	50





PAVEMENT INVESTIGATION DATA SHEET

Project:44648.1.4

TIP:R-5777C

County:CRAVEN

Route:US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - EASTBOUND

Date:7/22 - 7/30/2019

Notes By:POWELL, S. H.

		Width				Pavement Structure , Thickness						Subgrade							GPS Coordinates	
Test Location	Cut or Fill (Estimated Depth in feet)	Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / (Total to Subgrade in inches)	Asphalt (inches)	Concrete (inches)	ABC (inches)			Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting	
LOCATION 1 EB OES	GRADE LT	EB RTL 12.0	EB OSS 4.0	6.0 FW LT	S (LT)							1.0' - 4.0' UNDIVIDED COASTAL PLAIN: : BROWN, BLACK, FINE SANDY CLAY	REF S-3	A-6	M	6	LOW SEVERITY EDGE CRACKING IN EB OSS	446,408	2,613,454	
	FILL RT 2	EB OSL 12.0	EB ISS 5.0									4.0' - 6.0' UNDIVIDED COASTAL PLAIN: BROWN, GRAY, FINE SANDY CLAY	REF S-1	A-6	M		MODERATE LONGITUDINAL CRACKING IN EB LTL			
		EB ISL 12.0														LOW SEVERITY LONGITUDINAL CRACKING IN CONSTRUCTION JOINT BETWEEN EB OSL AND EB ISL				
		EB LTL 12.0														MODERATE LONGITUDINAL CRACKING IN CENTER OF EB RTL				
																	LOW TO MODERATE SEVERITY FATIGUE CRACKING IN EB ISL			
LOCATION 2 EB EM	GRADE	EB OSL 12.0	EB OSS 4.0	6.0 FY RT	S (LT)							1.0' - 4.0' UNDIVIDED COASTAL PLAIN: BROWN, GRAY, FINE SANDY CLAY	REF S-39	A-6	M	6	LOW TO MODERATE SEVERITY EDGE CRACKING IN EB ISS	446,814	2,613,187	
		EB ISL 12.0	EB ISS 4.0									4.0' - 6.0' UNDIVIDED COASTAL PLAIN: TAN, YELLOW, GRAY, BROWN, FINE SANDY CLAY	REF S-41	A-6	M		LOW SEVERITY TRANSVERSE CRACKING IN EB OSL AND EB ISL			
LOCATION 3 EB OES	GRADE	EB OSL 12.0	EB OSS 4.0	6.0 FW LT	S (LT)							1.0' - 6.0' UNDIVIDED COASTAL PLAIN: BROWN, TAN, FINE SANDY CLAY	REF S-43	A-6	M	6	LOW SEVERITY FATIUGE CRACKING IN EB OSS	447,172	2,612,793	
		EB ISL 12.0	EB ISS 4.0														LOW TO MODERATE SEVERITY TRANSVERSE CRACKING IN CONSTRUCTION JOINT BETWEEN EB OSL AND EB ISL			
LOCATION 4 EB EM	GRADE LT	EB OSL 12.0	EB OSS 4.0	6.0 FY RT	S (LT)							1.0' - 3.0' ROADWAY EMBANKMENT: TAN, YELLOW, BROWN, SILTY FINE TO COARSE SAND	REF S-12	A-2-4	M	6	NO DISTRESS IN EB LANES	447,512	2,612,458	
	FILL RT 3	EB ISL 12.0	EB ISS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-4	A-6	M					
LOCATION 5 EB OSS	GRADE LT	EB OSL 12.0	EB OSS 4.0	1.0 FW LT	S (LT)	ASPHALT (7.5)	7.5					0.6' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE TO COARSE SANDY CLAY	REF S-43	A-6	M	6	MODERATE SEVERITY FATUIGE CRACKING IN EB ISS	447,817	2,611,977	
	FILL RT 4	EB ISL 12.0	EB ISS 4.0			ASPHALT (9.5)						0.8' - 3.0' ROADWAY EMBANKMENT: GRAY, WHITE, SILTY FINE TO COARSE SAND	S-44	A-2-4	W	6	LOW SEVERITY FATUIGE CRACKING IN EB ISL	447,825	2,611,981	
LOCATION 5 EB OSL				7.0 FW RT			9.5					3.0' - 6.0' UNDIVIDED COASTAL PLAIN: BLACK, BROWN , FINE SANDY CLAY	REF S-40	A-6	M					
						ASPHALT (10.5)						0.9' - 3.5' ROADWAY EMBANKMENT: TAN, YELLOW, CLAYEY FINE TO COARSE SAND	REF S-42	A-2-6	M	6		447,842	2,611,991	
LOCATION 5 EB ISS				1.5 FY RT			10.5					3.5' - 6.0' UNDIVIDED COASTAL PLAIN: BLACK, GRAY, FINE SANDY CLAY	REF S-43	A-6	M					

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PAVEMENT INVESTIGATION DATA SHEET

Project:44648.1.4

TIP:R-5777C

County:CRAVEN

Route:US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - EASTBOUND

Date:7/22 - 7/30/2019

Notes By:POWELL, S. H.

		Width				Pavement Structure , Thickness						Subgrade							GPS Coordinates						
Test Location	Cut or Fill (Estimated Depth in feet)	Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / (Total to Subgrade in inches)	Asphalt (inches)	Concrete (inches)	ABC (inches)			Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting						
LOCATION 6 EB OES	FILL 2.5	EB OSL 12.0	EB OSL 3.5	5.5 FW LT	C							1.0' - 2.5' ROADWAY EMBANKMENT: BROWN, TAN, CLAYEY FINE TO COARSE SAND	REF S-42	A-2-6	M	6	LOW SEVERITY FATIGUE CRACKING IN OUTSIDE WHEEL PATH OF EB ISL	448,050	2,611,573						
		EB ISL 12.0	EB ISS 4.0																2.5' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BROWN, TAN, FINE SANDY CLAY	REF S-43	A-6	M			
LOCATION 7 EB EM	FILL 3.5	EB OSL 12.0	EB OSS 4.0	6.0 FY RT	C							1.0' - 3.5' ROADWAY EMBANKMENT: TAN, BROWN, CLAYEY FINE TO COARSE SAND	REF S-42	A-2-6	M	6	LOW SEVERITY TRANSVERSE CRACKING IN EB OSS AND EB OSL	448,319	2,611,160						
		EB ISL 12.0	EB ISS 4.0																3.5' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BROWN, FINE SANDY CLAY	REF S-43	A-6	M			
LOCATION 8 EB OES	FILL 3	EB OSL 12.0	EB OSS 4.0	6.0 FW LT	C							1.0' - 3.0' ROADWAY EMBANKMENT: BROWN, BLACK, CLAYEY FINE TO COARSE SAND	REF S-42	A-2-6	M	6	LOW SEVERITY FATUIGE CRACKING IN BOTH WHEEL PATHS OF EB OSL AND EB ISL	448,690	2,610,402						
		EB ISL 12.0	EB ISS 4.0																3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-40	A-6	M			
LOCATION 9 EB EM	FILL 3	EB OSL 12.0	EB OSS 4.0	6.0 FY RT	C							1.0' - 4.0' ROADWAY EMBANKMENT: TAN, GRAY, BROWN, CLAYEY FINE TO COARSE SAND	REF S-42	A-2-6	M	6	LOW TO MODERATE SEVERITY TRANSVERSE CRACKING IN EB OSS AND EB LTL	448,995	2,609,951						
		EB ISL 12.0	EB ISS 4.0																4.0' - 6.0'- UNDIVIDED COASTAL PLAIN: BLACK, GRAY, FINE SANDY CLAY	REF S-38	A-6	M			
		EB LTL 11.5																							
LOCATION 10 EB OES	FILL 3.5	EB OSL 12.0	EB OSS 4.0	6.0 FW LT	C							1.0' - 3.5' ROADWAY EMBANKMENT: BROWN, BLACK, FINE TO COARSE SANDY CLAY	REF S-39	A-6	M	6	NO DISTRESS IN EB LANES	449,225	2,609,423						
		EB ISL 12.0	EB ISS 4.0																3.5' - 6.0' UNDIVIDED COASTAL PLAIN: BLACK, FINE SANDY CLAY	S-43	A-6	M			

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PAVEMENT INVESTIGATION DATA SHEET

Project:	44648.1.4	County:	CRAVEN	Date:	7/22 - 7/30/2019
TIP:	R-5777C	Route:	US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - EASTBOUND	Notes By:	POWELL, S. H.

		Width				Pavement Structure , Thickness						Subgrade							GPS Coordinates	
Test Location	Cut or Fill (Estimated Depth in feet)	Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / (Total to Subgrade in inches)	Asphalt (inches)	Concrete (inches)	ABC (inches)			Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting	
LOCATION 11 EB OSS	FILL 2	EB OSL 12.0	EB OSS 4.0	2.0 FW LT	S (RT)	ASPHALT (11.0)	11.0					0.9' - 2.0' ROADWAY EMBANKMENT: TAN, YELLOW, CLAYEY FINE TO COARSE SAND	REF S-42	A-2-6	M	6	LOW SEVERITY LONGITUDINAL CRACKING IN EB OSL	449,660	2,608,680	
		EB ISL 12.0	EB ISS 4.0									2.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK FINE SANDY CLAY	REF S-40	A-6	W					
LOCATION 11 EB ISL				2.0 FY LT		ASPHALT (10.0)	10.0					0.8' - 2.5' ROADWAY EMBANKMENT: TAN, YELLOW, GRAY, WHITE, SILTY FINE TO COARSE SAND	S-37	A-2-4	M	6		449,678	2,608,692	
												2.5' - 6.0' UNDIVIDED COASTAL PLAIN: BLACK, GRAY, FINE SANDY CLAY	REF S-34	A-6	M					
LOCATION 11 EB ISS				2.0 FY RT		ASPHALT (8.5)	8.5					0.7' - 3.0' ROADWAY EMBANKMENT: YELLOW, TAN, GRAY, BLACK, SILTY FINE TO COARSE SAND	REF S-30	A-2-4	M	6		449,684	2,608,697	
												3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY SILT	S-36	A-4	W					
LOCATION 12 EB OES	FILL 3	EB OSL 12.0	EB OSS 4.0	6.0 FW LT	S (RT)							1.0' - 4.0' ROADWAY EMBANKMENT: BROWN, TAN, FINE TO COARSE SANDY CLAY	REF S-39	A-6	M	6	MODERATE SEVERITY LONGITUDINAL CRACKING IN CONSTRUCTION JOINT OF EB OSL AND EB ISL, POTHOLE FORMING 1" TO 2"	449,990	2,608,252	
		EB ISL 11.5	EB ISS 4.5									4.0' - 6.0' UNDIIDED COASTAL PLAIN: BROWN, FINE SANDY CLAY	REF S-41	A-6	M					
LOCATION 13 EB EM	FILL 4.5	EB OSL 12.0	EB OSS 3.5	6.0 FY RT	S (RT)							1.0' - 4.5' ROADWAY EMBANKMENT: BROWN, FINE TO COARSE SANDY SILT	REF S-35	A-4	M	6	LOW SEVERITY LONGITUDINAL CRACKING BETWEEN EB OSL AND EB ISL	450,363	2,607,916	
		EB ISL 12.5	EB OSS 4.0									4.5' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK SILTY FINE TO COARSE SAND	REF S-31	A-2-4	M					
LOCATION 14 EB OES	FILL 3.5	EB OSL 12.0	EB OSS 4.0	6.0 FW LT	S (RT)							1.0' - 3.5' ROADWAY EMBANKMENT: BROWN, BLACK, FINE TO COARSE SANDY CLAY	REF S-39	A-6	M	6	HIGH SEVERITY LONGITUDINAL CRACKING IN CONSTRUCTION JOINT OF EB OSL AND EB ISL, POTHOLE FORMING 2"	450,695	2,607,521	
		EB ISL 12.0	EB ISS 4.5									3.5' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, FINE SANDY CLAY	REF S-41	A-6	W					

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PAVEMENT INVESTIGATION DATA SHEET

Project:44648.1.4

TIP:R-5777C

County:CRAVEN

Route:US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - EASTBOUND

Date:7/22 - 7/30/2019

Notes By:POWELL, S. H.

		Width				Pavement Structure , Thickness						Subgrade							GPS Coordinates	
Test Location	Cut or Fill (Estimated Depth in feet)	Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / (Total to Subgrade in inches)	Asphalt (inches)	Concrete (inches)	ABC (inches)			Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting	
LOCATION 15 EB OES	FILL 3.5	EB RTL 12.5	EB OSS 3.5	6.0 FW LT	S (RT)							1.0' - 3.5' ROADWAY EMBANKMENT: TAN , BROWN, GRAY, CLAYEY FINE TO COARSE SAND	S-42	A-2-6	M	6	MODERATE SEVERITY TRANSVERSE CRACKING IN EB RTL AND EB OSL	451,272	2,607,048	
		EB OSL 12.5	EB ISS 4.0										3.5' - 6.0' UNDIVIDED COASTAL PLAIN: BLACK, GRAY, SILTY FINE TO COARSE SAND	REF S-31	A-2-4	W		MODERATE SEVERITY LONGITUDINAL CRACKING ALONG CONSTRUCTION JOINT OF EB OSL AND EB ISL		
		EB ISL 12.0															ROUGHING IN CENTER OF EB ISL			
LOCATION 16 EB EM	FILL 3	EB OSL 12.0	EB OSS 4.0	6.0 FY RT	S (RT)							1.0' - 3.0' ROADWAY EMBANKMENT: BROWN, GRAY, FINE TO COARSE SANDY SILT	S-35	A-4	M	6	LOW SEVERITY LONGITUDINAL CRACKING ALONG CONSTRUCTION JOINT OF EB OSL AND EB ISL	451,715	2,606,862	
		EB ISL 12.0	EB ISS 4.0										3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, SILTY FINE TO COARSE SAND	REF S-31	A-2-4	M		LOW SEVERITY TRANSVERSE CRACKING IN EB OSL AND EB ISL		
LOCATION 17 EB OES	FILL LT 4	EB OSL 12.0	EB OSS 4.0	6.0 FW LT	C							1.0' - 4.0' ROADWAY EMBANKMENT: BROWN, TAN, FINE TO COARSE SANDY CLAY	REF S-39	A-6	M	6	LOW SEVERITY TRANSVERSE CRACKING IN EB OSL AND EB ISL	452,177	2,606,601	
	FILL RT 2	EB ISL 12.5	EB ISS 4.0									4.0' - 6.0' UNDIVIDED COASTAL PLAIN: BLACK, GRAY, FINE SANDY CLAY	REF S-40	A-6	W					
LOCATION 18 EB EM	GRADE	EB OSL 12.0	EB OSS 4.0	6.0 FY RT	C							1.0' - 3.0' UNDIVIDED COASTAL PLAIN: GRAY, BROWN, SILTY FINE TO COARSE SAND	REF B-4	A-2-4	M	6	LOW SEVERITY TRANSVERSE CRACKING EB OSL AND EB ISL	452,634	2,606,422	
		EB ISL 12.0	EB ISS 4.5										3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY SILT	REF S-33	A-4	W				
LOCATION 19 EB OSS	GRADE	EB OSL 12.0	EB OSS 4.0	2.0 FW LT	C	ASPHALT (8.0)	8.0					0.7' - 3.0' UNDIVIDED COASTAL PLAIN: TAN, GRAY, YELLOW, FINE TO COARSE SANDY CLAY	REF S-7	A-6	M	6	MODERATE SEVERITY TRANSVERSE CRACKING IN EB OSL AND EB ISL	453,047	2,606,186	
		EB ISL 12.0	EB ISS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-41	A-6	M		MODERATE SEVERITY LONGITUDINAL CRACKING IN CONSTRUCTION JOINT OF EB OSL AND EB ISL			
LOCATION 19 EB OSL				7.5 FW RT		ASPHALT (18.0)	18.0	+6.0				BOTTOM OF CONCRETE CORE NOT RECOVERED CONCRETE GREATER THAN 6" DCP/AUGER NOT CONDUCTED	-	-	-			453,052	2,606,197	
LOCATION 19 EB ISS				2.0 FY RT		ASPHALT (9.0)	9.0					0.8' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-41	A-6	M	6		453,061	2,606,215	

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PAVEMENT INVESTIGATION DATA SHEET

Project:44648.1.4

TIP:R-5777C

County:CRAVEN

Route:US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - EASTBOUND

Date:7/22 - 7/30/2019

Notes By:POWELL, S. H.

		Width				Pavement Structure , Thickness						Subgrade							GPS Coordinates	
Test Location	Cut or Fill (Estimated Depth in feet)	Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / (Total to Subgrade in inches)	Asphalt (inches)	Concrete (inches)	ABC (inches)			Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting	
LOCATION 20 EB OES	FILL 3	EB OSL 12.0	EB OSS 4.0	6.0 FW LT	C							1.0' - 3.0' ROADWAY EMBANKMENT: TAN, BROWN, FINE TO COARSE SANDY CLAY	REF S-39	A-6	M	6	MODERATE SEVERITY LONGITUDINAL CRACKING ALONG CONSTRUCTION JOINT OF EB OSL AND EB ISL	453,506	2,605,970	
		EB ISL 12.0	EB ISS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: TAN, YELLOW, GRAY, FINE SANDY CLAY	S-41	A-6	W		LOW SEVERITY TRANSVERSE CRACKING IN EB OSL AND EB ISL			
LOCATION 21 EB EM	FILL 3	EB OSL 12.0	EB OSS 4.0	5.0 FY RT	C							1.0' - 3.0' ROADWAY EMBANKMENT: GRAY, BLACK, SILTY FINE TO COARSE SAND	REF B-4	A-2-4	M	6	NO DISTRESS IN EB LANES	453,994	2,605,776	
		EB ISL 12.0	EB ISS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, SILTY FINE TO COARSE SAND	REF S-31	A-2-4	M					
LOCATION 22 EB OES	FILL 3.5	EB OSL 12.0	EB OSS 4.0	6.0 FW LT	C							1.0' - 3.5' ROADWAY EMBANKMENT: BROWN, TAN, BLACK, FINE SANDY CLAY	REF S-39	A-6	M	6	MODERATE SEVERITY TRANSVERSE CRACKING IN EB OSL AND EB ISL	454,419	2,605,532	
		EB ISL 12.0	EB ISS 3.5									3.5' - 6.0' UNDIVIDED COASTAL PLAIN: BLACK, GRAY, FINE SANDY CLAY	S-40	A-6	W		LOW SEVERITY FATIGUE CRACKING AT CONSTRUCTION JOINT OF EB OSL AND EB ISL			
LOCATION 23 EB OES	FILL 3	EB OSL 12.0	EB OSS 4.0	6.0 FW LT	C							1.0' - 3.0' ROADWAY EMBANKMENT: BROWN, TAN, FINE TO COARSE SANDY CLAY	REF S-39	A-6	M	6	MODERATE SEVERITY TRANSVERSE CRACKING IN EB OSL AND EB ISL	455,011	2,605,251	
		EB ISL 12.0	EB ISS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: BROWN, TAN, FINE SANDY CLAY	REF S-38	A-6	M		MODERATE SEVERITY FATIGUE CRACKING ALONG CONSTRUCTION JOINT OF EB OSL AND EB ISL			
LOCATION 24 EB EM	FILL LT 2	EB OSL 12.0	EB OSS 4.0	6.0 FY RT	C							1.0' - 3.0' ROADWAY EMBANKMENT: BROWN, GRAY, SITLY FINE TO COARSE SAND	REF B-4	A-2-4	M	6	RIPPLING IN INSIDE WHEEL PATH OF EB ISL	455,498	2,605,059	
	FILL RT 3	EB ISL 12.0	EB ISS 4.0									3.0' - 6.0' UNDIVIDED OCASTAL PLAIN: BROWN, TAN, GRAY, FINE SANDY CLAY	S-34	A-6	W					
LOCATION 25 EB OES	GRADE	EB OSL 12.0	EB OSS 4.0	8.0 FW LT	C							1.0' - 3.5' UNDIVIDED COASTAL PLAIN: BROWN, BLACK, GRAY, FINE SANDY CLAY	S-39	A-6	M	6	LOW SEVERITY FATIGUE CRACKING AT CONSTRUCTION JOINT OF EB OSL AND EB ISL	455,899	2,604,824	
		EB ISL 12.0	EB ISS 4.0									3.5' - 6.0' UNDIVIDED COASTAL PLAIN: BLACK, BROWN, FINE SANDY CLAY	REF S-38	A-6	M		LOW SEVERITY FATIGUE CRACKING ALONG THE OUTSIDE WHEEL PATH OF EB ISL			

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PAVEMENT INVESTIGATION DATA SHEET

Project:	44648.1.4	County:	CRAVEN	Date:	7/22 - 7/30/2019
TIP:	R-5777C	Route:	US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - EASTBOUND	Notes By:	POWELL, S. H.

		Width				Pavement Structure , Thickness						Subgrade							GPS Coordinates	
Test Location	Cut or Fill (Estimated Depth in feet)	Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / (Total to Subgrade in inches)	Asphalt (inches)	Concrete (inches)	ABC (inches)			Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting	
LOCATION 26 EB OSS	FILL 3	EB OSL 12.0	EB OSS 4.0	2.0 FW LT	C	ASPHALT (8.5)	8.5					0.7' - 3.0' ROADWAY EMBANKMENT: GRAY, WHITE, BLACK, FINE TO COARSE SANDY SILT	REF S-33	A-4	M	6	LOW SEVERITY FATIGUE CRACKING IN OUTSIDE WHEEL PATH OF EB ISL	456,452	2,604,567	
		EB ISL 12.0	EB ISS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: BLACK, GRAY, FINE SANDY CLAY	S-38	A-6	M					
LOCATION 26 EB OSL				5.0 FW RT		ASPHALT CONCRETE (24.0)	18.0	6.0				2.0' - 3.0' ROADWAY EMBANKMENT: WHITE, BLACK, FINE SANDY SILT	REF S-33	A-4	M	6		456,456	2,604,574	
												3.0' - 6.0' UNDIVIDED COASTAL PLAIN: BLACK, GRAY, FINE SANDY CLAY	REF S-38	A-6	M					
LOCATION 26 EB ISS				2.0 FY LT		ASPHALT (8.0)	8.0					0.7' - 3.0' ROADWAY EMBANKMENT: GRAY, WHITE, BLACK, FINE SANDY SILT	S-33	A-4	M	6		456,466	2,604,593	
												3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK SILTY CLAY	REF S-29	A-7-6	M					
LOCATION 27 EB OES	FILL 4	EB OSL 12.0	EB OSS 4.0	4.0 FW LT	S (RT)							1.0' - 4.0' ROADWAY EMBANKMENT: BROWN, YELLOW, TAN, SILTY FINE TO COARSE SAND	REF B-4	A-2-4	M	6	LOW SEVERITY LONGITUDINAL CRACKING ALONG CONSTRUCTION JOINT OF EB OSL AND EB ISL	457,365	2,604,172	
		EB ISL 12.0	EB ISS 4.0								4.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE TO COARSE SANDY SILT	REF S-32	A-4	M						
LOCATION 28 EB EM	FILL 3	EB OSL 12.5	EB OSS 4.5	6.0 FY RT	S (RT)							1.0' - 3.0' ROADWAY EMBANKMENT: BROWN, FINE TO COARSE SILTY SAND	REF B-4	A-2-4	M	6	NO DISTRESS OBSERVED	457,846	2,604,073	
		EB ISL 12.0	EB ISS 4.0								3.0' - 6.0' UNDIVIDED COASTAL PLAIN: BLACK, GRAY, SILTY CLAY	REF S-29	A-7-6	M						
LOCATION 29 EB OES	FILL 2	EB OSL 12.0	EB OSS 4.0	9.0 FW LT	C							*UNABLE TO PREFORM DUE TO UTILITY CONFLICTS					MODERATE SEVERITY FATIGUE CRACKING IN BOTH WHEEL PATHS OF EB ISL	458,483	2,603,864	
		EB ISL 12.0	EB ISS 4.0																	
LOCATION 30 EB EM	FILL 3.5	EB OSL 12.0	EB OSS 3.5	6.0 FY RT	C							1.0' - 3.0' ROADWAY EMBANKMENT: BROWN, GRAY, TAN, SILTY FINE TO COARSE SAND	REF S-30	A-2-4	M	6	NO DISTRESS OBSERVED	458,967	2,603,773	
		EB ISL 12.0	EB ISS 4.0								3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, TAN, SILTY FINE TO COARSE SAND	REF S-31	A-2-4	W						
LOCATION 31 EB OES	FILL 4	EB OSL 12.0	EB OSS 4.0	9.0 FW LT	S (LT)							1.0' - 4.0' ROADWAY EMBANKMENT: BROWN, GRAY, SILTY FINE TO COARSE SAND	REF B-4	A-2-4	M	6	LOW SEVERITY FATIGUE CRACKING IN INSIDE WHEEL PATH OF EB OSL AND EB ISL	459,457	2,603,590	
		EB ISL 12.5	EB ISS 3.5								4.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, SILTY CLAY	REF S-29	A-7-6	W						

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PAVEMENT INVESTIGATION DATA SHEET

Project:	44648.1.4	County:	CRAVEN	Date:	7/22 - 7/30/2019
TIP:	R-5777C	Route:	US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - EASTBOUND	Notes By:	POWELL, S. H.

		Width				Pavement Structure , Thickness						Subgrade							GPS Coordinates	
Test Location	Cut or Fill (Estimated Depth in feet)	Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / (Total to Subgrade in inches)	Asphalt (inches)	Concrete (inches)	ABC (inches)			Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting	
LOCATION 32 EB EM	FILL 4	EB RTL 12.5	EB OSS 4.0	6.0 FY RT	C							1.0' - 4.0' ROADWAY EMBANKMENT: BROWN, TAN, GRAY, SILTY FINE TO COARSE SAND	REF S-30	A-2-4	M	6	MODERATE SEVERITY TRANSVERSE CRACKING IN EB LTL	459,965	2,603,440	
		EB OSL 12.5	EB ISS 4.0									4.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, SILTY CLAY	REF S-29	A-7-6	M		LOW SEVERITY TRANSVERSE CRACKING IN OUTSIDE WHEEL PATH OF EB LTL			
		EB ISL 12.0																		
		EB LTL 12.0																		
LOCATION 33 EB OSS	FILL 3	EB OSL 12.0	EB OSS 4.0	2.5 FW LT	C	ASPHALT (8.5)	8.5					0.7' - 3.0' ROADWAY EMBANKMENT: YELLOW, BROWN, GRAY, FINE TO COARSE SANDY SILT	S-32	A-4	M	6	LOW SEVERITY TRANSVERSE CRACKING IN EB OSL	460,388	2,603,194	
		EB ISL 12.0	EB ISS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-28	A-6	M					
LOCATION 33 EB ISL				3.0 FY LT		ASPHALT (18.0)	18.0					1.5' - 3.0' ROADWAY EMBANKMENT: GRAY, BLACK, SILTY FINE TO COARSE SAND	REF S-31	A-2-4	M	6		460,397	2,603,212	
												3.0 - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-26	A-6	W					
LOCATION 33 EB ISS				3.0 FY RT		ASPHALT (8.5)	8.5					0.7' - 3.0' ROADWAY EMBANKMENT: GRAY, BLACK, FINE SANDY CLAY	S-31	A-2-4	M	6		460,400	2,603,219	
												3.0 - 6.0 UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-26	A-6	W					
LOCATION 34 EB OES	FILL 3	EB OSL 12.0	EB OSS 4.0	6.0 FW LT	C							1.0' - 3.0' ROADWAY EMBANKMENT: BROWN, SILTY FINE TO COARSE SAND	REF S-30	A-2-4	M	6	MODERATE SEVERITY TRANSVERSE CRACKING IN EB OSL AND EB ISL	460,861	2,602,966	
		EB ISL 12.0	EB ISS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, SILTY FINE TO COARSE SAND	REF S-31	A-2-4	M					
LOCATION 35 EB EM	FILL 3	EB OSL 12.0	EB OSS 4.5	6.0 FY RT	C							1.0' - 3.0' ROADWAY EMBANKMENT: BROWN, GRAY, TAN, SILTY FINE TO COARSE SAND	REF S-30	A-2-4	W	6	LOW SEVERITY LONGITUDINAL CRACKING EB ISL	461,320	2,602,789	
		EB ISL 12.0	EB ISS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, SILTY FINE TO COARSE SAND	REF S-23	A-2-4	W					
LOCATION 36 EB OES	GRADE	EB OSL 12.5	EB OSS 4.0	7.0 FW LT	C							1.0' - 4.0' UNDIVIDED COASTAL PLAIN: BROWN, GRAY, TAN, SILTY FINE TO COARSE SAND	REF B-1	A-2-4	M	6	LOW SEVERITY TRANSVERSE CRACKING IN EB OSL	461,739	2,602,552	
		EB ISL 12.0	EB ISS 3.5									4.0' - 6.0' UNDIVIDED COASTAL PLAIN: BROWN, GRAY, BLACK, SILTY FINE TO COARSE SAND	REF S-31	A-2-4	M		LOW SEVERITY FATIGUE CRACKING ALONG YELLOW LINE OF EB ISL AND EB ISS			

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PAVEMENT INVESTIGATION DATA SHEET

Project:44648.1.4

TIP:R-5777C

County:CRAVEN

Route:US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - EASTBOUND

Date:7/22 - 7/30/2019

Notes By:POWELL, S. H.

		Width				Pavement Structure , Thickness						Subgrade							GPS Coordinates	
Test Location	Cut or Fill (Estimated Depth in feet)	Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / (Total to Subgrade in inches)	Asphalt (inches)	Concrete (inches)	ABC (inches)			Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting	
LOCATION 37 EB OES	GRADE	EB OSL 12.0	EB OSS 4.0	8.0 FW LT	C							1.0' - 5.0' UNDIVIDED COASTAL PLAIN: BROWN, GRAY, BLACK, SILTY FINE TO COARSE SAND	REF B-4	A-2-4	M	6	MODERATE SEVERITY TRANSVERSE CRACKING IN EB OSL AND EB ISL	462,279	2,602,290	
		EB ISL 12.0	EB ISS 1.0										5.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, SILTY FINE SAND	REF S-31	A-2-4	M		MODERATE SEVERITY LONGITUDINAL CRACKING IN RTL LT ALONG CONSTRUCTION JOINT OF EB OSL		
		EB LTL 2.0																		
LOCATION 38 EB EM	FILL 3	EB OSL 12.0	EB OSS 4	6 FY RT	C							1.0' - 3.0' ROADWAY EMBANKMENT: BROWN, YELLOW, TAN, SILTY FINE SAND	REF S-24	A-2-4	M	6	MODERATE SEVERITY TRANSVERSE CRACKING IN EB OSL, EB ISL, EB OSS, AND EB ISS	462,718	2,602,128	
		EB ISL 12.0	EB ISS 3.5										3.0' - 6.0' UNDIVIDED COASTAL PLAIN: YELLOW, BROWN, GRAY, FINE SANDY CLAY	REF S-28	A-6	W		MODERATE LONGITUDINAL CRACKING ALONG CONSTRUCTION JOINT BETWEEN EB OSL AND EB ISL		
LOCATION 39 EB OES	FILL 3	EB OSL 12.0	EB OSS 4	9 FW LT	C							1.0' - 3.0' ROADWAY EMBANKMENT: BROWN, GRAY, SILTY FINE TO COARSE SAND	REF B-4	A-2-4	M	6	LOW TO MODERATE SEVERITY TRANSVERSE CRACKING IN EB OSL, EB ISL, AND EB ISS	463,193	2,601,864	
		EB ISL 12.0	EB ISS 4.0										3.0' - 6.0' UNDIVIDED COASTAL PLAIN: YELLOW, TAN, GRAY, SILTY FINE TO COARSE SAND	REF S-31	A-2-4	M		LOW SEVERITY EDGE CRACKING IN EB OSS		
																		LOW SEVERITY LONGITUDINAL CRACKING ALONG CONSTRUCTION JOINT BETWEEN EB ISL AND EB OSL		
LOCATION 40 EB EM	FILL 3	EB OSL 12.5	EB OSS 4.0	6.0 FY RT	C							1.0' - 3.0' ROADWAY EMBANKMENT: BROWN, GRAY, CLAYEY FINE TO COARSE SAND	REF S-25	A-2-6	M	6	LOW TO MODERATE SEVERITY TRANSVERSE CRACKING IN EB OSL, EB ISL, EB ISS, AND EB OSS	463,643	2,601,693	
		EB ISL 12.0	EB ISS 3.5										3.0' - 6.0' UNDIVIDED COASTAL PLAIN: YELLOW, TAN, SILTY CLAY	REF S-29	A-7-6	M		TRANSVERSE CRACKING REFLECTS JOINTING		
																		LOW SEVERITY LONGITUDINAL CRACKING IN CONSTRUCTION JOINT BETWEEN EB OSL AND EB ISL		

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PAVEMENT INVESTIGATION DATA SHEET

Project:44648.1.4

TIP:R-5777C

County:CRAVEN

Route:US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - EASTBOUND

Date:7/22 - 7/30/2019

Notes By:POWELL, S. H.

		Width				Pavement Structure , Thickness						Subgrade							GPS Coordinates	
Test Location	Cut or Fill (Estimated Depth in feet)	Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / (Total to Subgrade in inches)	Asphalt (inches)	Concrete (inches)	ABC (inches)			Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting	
LOCATION 41 EB OSS	FILL 3	EB OSL 12.0	EB OSS 4.0	2.0 FW LT	C	ASPHALT (8.0)	8.0					0.7' - 3.0' ROADWAY EMBANKMENT: GRAY, BLACK, BROWN, SILTY FINE TO COARSE SAND	REF B-4	A-2-4	M	6	LOW SEVERITY TRANSVERSE CRACKING THROUGH ALL EB LANES AND SHOULDERS	463,955	2,601,509	
		EB ISL 12.5	EB ISS 3.5									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, SILTY CLAY	REF S-29	A-7-6	M		LOW SEVERITY LONGITUDINAL CRACKING IN CONSTRUCTION JOINT BETWEEN EB OSL AND EB ISL			
LOCATION 41 EB OSL				5.5 FW RT		ASPHALT CONCRETE (>19.0)	17.0	>2.0				BOTTOM OF CONCRETE CORE WAS NOT RECOVERED (CONCRETE GREATER THAN 2") DCP/AUGER NOT CONDUCTED						463,957	2,601,515	
LOCATION 41 EB ISS				2.0 FY RT		ASPHALT (7.5)	7.5					0.6' - 3.0' ROADWAY EMBANKMENT: BROWN, YELLOW, SILTY FINE TO COARSE SAND	REF B-4	A-2-4	M	6		463,967	2,601,535	
												3.0' - 6.0' UNDIVIDED COASTAL PLAIN: YELLOW, BLACK, GRAY, SILTY CLAY	REF S-29	A-7-6	M					
LOCATION 42 EB OES	GRADE	EB OSL 12.0	EB OSS 4.0	6.0 FW LT	C							1.0' - 4.0' UNDIVIDED COASTAL PLAIN: BROWN, TAN, SILTY FINE TO COARSE SAND	REF B-4	A-2-4	M	6	LOW SEVERITY TRANSVERSE CRACKING THROUGH ALL LANES AND SHOULDERS	464,635	2,601,183	
		EB ISL 12.0	EB ISS 4.0								4.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BROWN, BLACK, SILTY CLAY	REF S-29	A-7-6	M		LOW SEVERITY LONGITUDINAL CRACKING ALONG CONSTRUCTION JOINT BETWEEN EB ISL AND OSL				
LOCATION 43 EB EM	FILL 3	EB OSL 12.0	EB OSS 4.0	6.0 FY RT	C							1.0' - 3.0' ROADWAY EMBANKMENT: BROWN, GRAY, TAN, YELLOW, SILTY FINE SAND	REF S-24	A-2-4	M	6	LOW SEVERITY TRANSVERSE CRACKING IN EB OSL AND EB ISL	465,101	2,601,003	
		EB ISL 12.5	EB ISS 3.5								3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, TAN, BLACK, SILTY CLAY	REF S-29	A-7-6	W						
LOCATION 44 EB OES	FILL 4	EB OSL 12.0	EB OSS 4.0	6.0 FW RT	C							1.0' - 4.0' ROADWAY EMBANKMENT: TAN, YELLOW, BROWN, GRAY, SILTY FINE SAND	REF S-30	A-2-4	M	6	LOW SEVERITY TRANSVERSE CRACKING IN EB ISL AND EB ISS	465,611	2,600,720	
		EB ISL 12.5	EB ISS 3.5								4.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-26	A-6	M		LOW SEVERITY FATIGUE CRACKING IN BOTH WHEEL PATHS OF EB OSL				
																LOW SEVERITY LONGITUDINAL CRACKING IN CONSTRUCTION JOINT BETWEEN EB OSL AND EB ISL				
LOCATION 45 EB OES	FILL 2	EB OSL 12.0	EB OSS 4.5	7.0 FW LT	C							1.0' - 2.0' ROADWAY EMBANKMENT: TAN, YELLOW, GRAY, CLAYEY FINE TO COARSE SAND	REF S-25	A-2-6	M	6	LOW SEVERITY TRANSVERSE CRACKING IN EB ISL	466,347	2,600,370	
		EB ISL 12.5	EB ISS 4.0								2.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-22	A-6	M		LOW SEVERITY LONGITUDINAL CRACKING IN THE CENTER OF EB ISL				
																LOW SEVERITY LONGITUDINAL CRACKING IN CONSTRUCTION JOINT BETWEEN EB OSL AND EB ISL				

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PAVEMENT INVESTIGATION DATA SHEET

Project:44648.1.4

TIP:R-5777C

County:CRAVEN

Route:US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - EASTBOUND

Date:7/22 - 7/30/2019

Notes By:POWELL, S. H.

		Width				Pavement Structure , Thickness						Subgrade							GPS Coordinates	
Test Location	Cut or Fill (Estimated Depth in feet)	Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / (Total to Subgrade in inches)	Asphalt (inches)	Concrete (inches)	ABC (inches)			Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting	
LOCATION 46 EB EM	FILL 2	EB OSL 12.0	EB OSL 4.0	6.0 FY RT	C							1.0' - 2.0' ROADWAY EMBANKMENT: BROWN, TAN, GRAY, SILTY FINE TO COARSE SAND	REF S-30	A-2-4	M	6	LOW SEVERITY TRANSVERSE CRACKING IN OUTSIDE WHEEL PATH OF EB ISL	466,811	2,600,194	
		EB ISL 12.5	EB ISS 3.5									2.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, TAN, BLACK, SILTY CLAY	REF S-29	A-7-6	M		LOW SEVERITY LONGITUDINAL CRACKING IN CONSTRUCTION JOINT BETWEEN EB OSL AND EB ISL			
LOCATION 47 EB OES	FILL 2	EB OSL 12.5	EB OSS 4.0	6.0 FW LT	C							1.0' - 2.0' ROADWAY EMBANKMENT: GRAY, TAN, SILTY FINE TO COARSE SAND	REF S-23	A-2-4	M	6	LOW SEVERITY EDGE CRACKING IN EB ISS	467,275	2,599,934	
		EB ISL 12.0	EB ISS 4.0									2.0' - 6.0' UNDIVIDED COASTAL PLAIN: BLACK, GRAY, FINE SANDY CLAY	REF S-22	A-6	M		LOW SEVERITY TRANSVERSE CRACKING IN OUTSIDE WHEEL PATH OF EB ISL			
																	LOW SEVERITY LONGITUDINAL CRACKING IN CONSTRUCTION JOINT BETWEEN EB OSL AND EB ISL			
LOCATION 48 EB OSS	FILL 3	EB OSL 12.0	EB OSS 4.0	2.0 FW RT		ASPHALT (10.5)	10.5					0.9' - 3.0' ROADWAY EMBANKMENT: YELLOW, GRAY, BROWN, FINE SANDY CLAY	REF S-3	A-6	M	6	LOW SEVERITY LONGITUDINAL CRACKING IN CONSTRUCTION JOINT BETWEEN EB OSL AND EB ISL	467,582	2,599,791	
		EB ISL 12.0	EB ISS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-7	A-6	M					
LOCATION 48 EB ISL				3.0 FY LT		ASPHALT (10.25)	10.25					0.9' - 3.0' ROADWAY EMBANKMENT: TAN, YELLOW, SILTY FINE TO COARSE SAND	S-30	A-2-4	M	6.0		467,591	2,599,811	
												3.0' - 6.0' UNDIVIDED COASTAL PLAIN: BLACK, GRAY, SILTY CLAY	REF S-29	A-7-6	M					
LOCATION 48 EB ISS				2.0 FY RT		ASPHALT (6.25)	6.25					0.5' - 3.0' ROADWAY EMBANKMENT: GRAY, WHITE, SILTY FINE TO COARSE SAND	REF S-23	A-2-4	M	6		467,595	2,599,818	
												3.0' - 6.0' UNDIVIDED COASTAL PLAIN: BLACK, GRAY, SILTY CLAY	S-29	A-7-6	M					
LOCATION 49 EB OES	FILL 4	EB OSL 12.0	EB OSS 4.0	6.0 FW LT	C							1.0' - 4.0' ROADWAY EMBANKMENT: YELLOW, TAN, FINE TO COARSE SILTY SAND	REF B-3	A-2-4	M	6	LOW SEVERITY LONGITUDINAL CRACKING IN CONSTRUCTION JOINT BETWEEN EB OSL AND EB ISL	468,017	2,599,583	
		EB ISL 12.5	EB ISS 4.0									4.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-27	A-6	M					
LOCATION 50 EB EM	FILL 3	EB OSL 12.5	EB OSS 4.0	6.0 FY RT	C							1.0' - 3.0' ROADWAY EMBANKMENT: BROWN, GRAY, TAN, CLAYEY FINE SAND	REF S-25	A-2-6	M	6	LOW SEVERITY EDGE CRACKING ON EB ISS	468,491	2,599,400	
		EB ISL 12.0	EB ISS 4.0									3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-28	A-6	M		LOW SEVERITY LONGITUDINAL CRACKING IN CONSTRUCTION JOINT BETWEEN EB OSL AND EB ISL			

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PAVEMENT INVESTIGATION DATA SHEET

Project:44648.1.4

TIP:R-5777C

County:CRAVEN

Route:US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - EASTBOUND

Date:7/22 - 7/30/2019

Notes By:POWELL, S. H.

		Width				Pavement Structure , Thickness						Subgrade							GPS Coordinates	
Test Location	Cut or Fill (Estimated Depth in feet)	Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / (Total to Subgrade in inches)	Asphalt (inches)	Concrete (inches)	ABC (inches)			Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting	
LOCATION 51 EB OES	FILL 3	EB OSL 12.0	EB OSS 4.0	6.0 FW LT	C							1.0' - 3.0' ROADWAY EMBANKMENT: TAN, YELLOW, SILTY FINE TO COARSE SAND	REF B-3	A-2-4	M	6	LOW SEVERITY EDGE CRACKING IN EB ISS	468,937	2,599,145	
		EB ISL 12.0	EB ISS 3.5										3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, FINE SANDY CLAY	REF S-28	A-6	M		LOW SEVERITY LONGITUDINAL CRACKING IN CONSTRUCTION JOINT BETWEEN EB OSL AND EB ISL		
		EB LTL 3.5																		
LOCATION 52 EB OES	FILL 3	EB OSL 12.0	EB OSS 4.0	6.0 FW LT	C							1.0' - 3.0' ROADWAY EMBANKMENT: TAN, YELLOW, CLAYEY FINE TO COARSE SAND	REF S-25	A-2-6	M	6	LOW SEVERITY TRANSVERSE CRACKING EB ISL AND EB ISS	469,401	2,598,928	
		EB ISL 12.0	EB ISS 4.0										3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BROWN, BLACK, SILTY CLAY	REF S-29	A-7-6	M		LOW SEVERITY LONGITUDINAL CRACKING IN CONSTRUCTION JOINT BETWEEN EB OSL AND EB ISL		
LOCATION 53 EB EM	FILL 4	EB OSL 12.5	EB OSS 4.5	6.5 FY RT	C							1.0' - 4.0' ROADWAY EMBANKMENT: TAN, BROWN, GRAY, SILTY FINE SAND	REF S-24	A-2-4	M	6	SHUTTING IN EB ISL	469,859	2,598,752	
		EB ISL 12.5	EB ISS 3.5										4.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-28	A-6	M		LOW SEVERITY LONGITUDINAL CRACKING IN CONSTRUCTION JOINT BETWEEN EB OSL AND EB ISL		
LOCATION 54 EB OES	FILL 4	EB OSL 12.0	EB OSS 4.0	4.0 FW LT	C							1.0' - 4.0' ROADWAY EMBANKMENT: GRAY, BROWN, TAN, FINE SANDY CLAY	REF S-8	A-6	M	6.0	LOW SEVERITY TRANSVERSE CRACKING IN EB ISS	470,284	2,598,511	
		EB ISL 12.5	EB ISS 4.0										4.0' - 6.0' UNDIVIDED COASTAL PLAIN: FINE SANDY CLAY	REF S-28	A-6	M		LOW SEVERITY LONGITUDINAL CRACKING IN CONSTRUCTION JOINT BETWEEN EB OSL AND EB ISL		
LOCATION 55 EB EM	FILL 3	EB OSL 12.0	EB OSS 4.0	7.0 FY RT	C							1.0' - 3.0' ROADWAY EMBANKMENT: TAN, YELLOW, BROWN, CLAYEY FINE TO COARSE SAND	REF S-25	A-2-6	M	6.0	LOW SEVERITY LONGITUDINAL CRACKING IN CONSTRUCTION JOINT BETWEEN EB OSL AND EB ISL	470,780	2,598,317	
		EB ISL 12.0	EB ISS 4.0										3.0' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-28	A-6	M				

Notes:

NB = Northbound  
SB = Southbound  
EB = Eastbound  
WB = Westbound

OSL = Outside Lane  
CL = Center Lane  
ISL = Inside Lane  
MP = Mile Post

COL = Collector Lane  
ACCEL = Acceleration Lane  
DECEL = Deceleration Lane

LTL = Left Turn Lane  
CTL = Center Turn Lane  
RTL = Right Turn Lane

RT = Right  
LT = Left  
(I) = Inside  
(O) = Outside

RT LN = Right Lane  
LT LN = Left Lane

OSS = Outside Shoulder  
ISS = Inside Shoulder  
PS = Paved Shoulder

OES = Outside Earth Shoulder  
EM = Earth Median

FW = From White Line  
FY = From Yellow Line  
AR = Auger Refusal  
NM = Not Measured





PAVEMENT INVESTIGATION DATA SHEET

Project:44648.1.4

TIP:R-5777C

County:CRAVEN

Route:US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - EASTBOUND

Date:7/22 - 7/30/2019

Notes By:POWELL, S. H.

		Width				Pavement Structure , Thickness						Subgrade							GPS Coordinates		
Test Location	Cut or Fill (Estimated Depth in feet)	Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / (Total to Subgrade in inches)	Asphalt (inches)	Concrete (inches)	ABC (inches)			Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting		
LOCATION 56 EB OSS	FILL LT 2.5	EB OSL 12.0	EB OSS 4.0	2.0 FW LT	C	ASPHALT (8.75)	8.75					0.7' - 2.5' ROADWAY EMBANKMENT: GRAY, WHITE, BLACK, SILTY FINE TO COARSE SAND	REF S-23	A-2-4	M	6	LOW SEVERITY LONGITUDINAL CRACKING IN CONSTRUCTION JOINT BETWEEN EB OSL AND EB ISL	471,090	2,598,135		
	FILL RT 3.5	EB ISL 12.0	EB ISS 4.0									2.5' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-26	A-6	M						
LOCATION 56 EB OSL				3.0 FW RT		ASPHALT (10.5)	10.5					0.9' - 2.5' ROADWAY EMBANKMENT: GRAY, WHITE, BLACK, SILTY FINE TO COARSE SAND	REF S-23	A-2-4	M	6		471,093	2,598,143		
												2.5' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	REF S-26	A-6	M						
LOCATION 56 EB ISS				2.0 FW RT		ASPHALT (7.0)	7.0					0.6' - 3.5' ROADWAY EMBANKMENT: GRAY, BROWN, BLACK, CLAYEY FINE TO COARSE SAND	REF S-25	A-2-6	M	6		471,102	2,598,161		
												3.5' - 6.0' UNDIVIDED COASTAL PLAIN: GRAY, BLACK, FINE SANDY CLAY	S-28	A-6	M						
LOCATION 57 EB OES	FILL 3	EB OSL 12.0	EB OSS 4.5	6.0 FW LT	C							1.0' - 3.0' ROADWAY EMBANKMENT: TAN, YELLOW, GRAY, SILTY FINE TO COARSE SAND	REF B-3	A-2-4	M	6	LOW SEVERITY FATIGUE CRACKING IN OUTSIDE WHEEL PATH OF EB OSL	471,537	2,597,919		
		EB ISL 11.5	EB ISS 4.0									3.0' - 4.0' UNDIVIDED COASTAL PLAIN: BROWN, GRAY, BLACK, FINE SANDY CLAY	REF S-26	A-6	M						
LOCATION 20 EB EM BULK				6.0 FY RT								1.0' - 4.0' ROADWAY EMBANKMENT: BROWN, TAN, SILTY FINE SAND	BULK-5	A-2-4	M	4		453,522	2,606,002		
LOCATION 41 EB EM BULK				6.0 FY RT								1.0' - 4.0' ROADWAY EMBANKMENT: BROWN, SILTY FINE TO COARSE SAND	BULK-4	A-2-4	M	4		463,969	2,601,540		

Notes:

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ACCEL = Acceleration Lane  
DECEL = Deceleration Lane

LTL = Left Turn Lane  
CTL = Center Turn Lane  
RTL = Right Turn Lane

RT = Right  
LT = Left  
(I) = Inside  
(O) = Outside

RT LN = Right Lane  
LT LN = Left Lane

OSS = Outside Shoulder  
ISS = Inside Shoulder  
PS = Paved Shoulder

OES = Outside Earth Shoulder  
EM = Earth Median

FW = From White Line  
FY = From Yellow Line  
AR = Auger Refusal  
NM = Not Measured





Dynamic Cone Penetrometer Data Sheet  
Project: 44648.1.4 (R-5777C), Craven County

Location		Location		Location		Location		Location		Location		Location		Location		Location		Location	
LOCATION 1 EB OES		LOCATION 2 EB EM		LOCATION 3 EB OES		LOCATION 4 EB EM		LOCATION 5 EB OSS		LOCATION 5 EB OSL		LOCATION 5 EB ISS		LOCATION 6 EB OES		LOCATION 7 EB EM		LOCATION 8 EB OES	
Datum	Date	Datum	Date	Datum	Date	Datum	Date	Datum	Date	Datum	Date	Datum	Date	Datum	Date	Datum	Date	Datum	Date
ESG	7/30/2019	ESG	7/30/2019	ESG	7/30/2019	ESG	7/30/2019	SG	7/30/2019	SG	7/30/2019	SG	7/30/2019	ESG	7/30/2019	ESG	7/30/2019	ESG	7/30/2019
Cut/Fill	Grade	Cut/Fill	Grade	Cut/Fill	Grade	Cut/Fill	Fill	Cut/Fill	Grade	Cut/Fill	Fill	Cut/Fill	Fill	Cut/Fill	Fill	Cut/Fill	Fill	Cut/Fill	Fill
Subgrade	A-6	Subgrade	A-6	Subgrade	A-6	Subgrade	A-2-4	Subgrade	A-6	Subgrade	A-2-4	Subgrade	A-2-6	Subgrade	A-2-6	Subgrade	A-2-6	Subgrade	A-2-6
Cumulative DCP Blows in CM		Cumulative DCP Blows in CM		Cumulative DCP Blows in CM		Cumulative DCP Blows in CM		Cumulative DCP Blows in CM		Cumulative DCP Blows in CM		Cumulative DCP Blows in CM		Cumulative DCP Blows in CM		Cumulative DCP Blows in CM		Cumulative DCP Blows in CM	
3.9		1.6		1.9		1.1		2.5		0.2	2.6	1.3	44.6	2.0		1.2		2.5	
9.5		3.4		4.3		2.4		4.3		0.6	3.0	2.1	45.5	3.9		2.6		4.8	
14.3		5.9		6.8		3.7		5.8		1.0	3.5	3.3	46.8	6.8		4.2		7.7	
20.1		9.1		8.9		5.0		7.2		1.2	4.0	4.2	48.5	9.2		6.0		10.8	
22.8		13.0		12.1		6.6		8.5		1.3	4.4	5.5	51.5	12.3		8.0		14.3	
25.8		15.8		15.6		8.3		10.2		1.6	4.7	6.3	53.8	17.0		10.7		18.5	
30.0		18.0		19.7		9.8		11.9		1.7	5.1	7.3	54.7	20.7		14.9		24.1	
34.5		19.7		24.7		11.4		14.3		2.0	5.8	8.1	57.5	25.4		18.7		28.3	
39.0		22.0		27.4		13.1		16.8		2.2	6.4	8.8	59.3	29.3		21.0		32.3	
42.9		24.7		28.0		14.8		18.6		2.4	6.9	9.5	61.1	32.3		23.1		37.1	
46.0		27.8		29.5		16.6		20.8		2.7	7.4	10.4	62.8	35.0		27.1		42.6	
49.0		31.1		31.0		17.9		23.0		2.8	7.6	11.1	64.4	38.0		34.0		47.6	
51.6		34.8		32.5		18.9		25.5		2.9	8.3	12.0	65.6	40.6		38.2		52.3	
54.2		38.8		34.0		20.1		27.5		3.1	9.0	12.7	67.0	43.2		40.2		56.6	
56.5		44.0		35.6		21.1		29.3		3.2	9.5	13.6	68.1	45.0		42.4		60.3	
58.6		47.4		37.4		22.3		32.1		3.3	10.3	14.4	69.1	46.9		45.7		63.5	
60.7		51.7		39.5		23.2		36.6		3.5	11.4	15.2	70.1	48.9		49.3		66.5	
62.7		55.7		41.9		24.2		39.3		3.6	12.2	15.8	71.2	51.6		52.6		69.4	
64.5		58.6		44.4		25.5		41.5		3.8	13.4	16.5	72.5	52.2		55.6		71.7	
66.4		60.7		46.7		27.0		44.4		3.9	14.7	16.9	73.8	53.5		58.2		73.9	
68.2		63.0		49.2		28.9		47.7		4.1	16.5	17.5	75.3	55.3		60.8		76.0	
69.9		65.5		51.7		31.6		50.8		4.2	18.8	18.0	77.0	56.9		62.6		77.9	
71.8		67.9		53.9		34.1		52.9		4.4	20.5	18.6	78.7	58.5		65.0		79.9	
73.4		70.0		55.9		36.5		55.6		4.5	21.8	19.3	80.3	60.2		67.5		82.0	
75.3		72.1		59.8		38.5		58.2		4.7	22.9	19.5	82.2	62.1		69.5		84.0	
77.2		73.9		61.6		40.6		59.7		4.8	24.1	19.9	84.1	64.9		71.4		85.8	
79.1		75.7		63.1		42.9		60.9		4.9	26.0	20.5	85.8	68.4		73.3		87.6	
81.0		77.8		64.6		45.2		62.1		5.0	29.0	21.0	87.2	71.6		75.1		89.4	
82.9		79.5		66.0		47.7		63.2		5.1	33.5	21.6	88.7	74.8		76.8		91.0	
84.8		81.1		67.4		50.1		64.3		5.2	37.1	22.3	90.5	77.6		78.6		92.8	
86.8		83.3		70.0		52.8		65.5		5.3	39.8	22.9	92.1	80.3		79.9		94.3	
88.7		85.0		71.1		54.7		66.9		5.4	40.6	23.3	93.8	82.2		81.9		95.9	
90.6		86.9		72.1		56.6		68.5		5.5	43.5	23.9	95.2	84.4		83.6		97.5	
92.4		88.6		73.1		59.0		70.6		5.6	45.0	24.5	96.6	86.5		85.0		99.2	
94.3		90.3		74.0		61.0		72.6		5.7	46.2	25.0	97.8	88.4		86.5			
96.3		91.9		75.0		63.1		74.5		5.8	47.2	25.4	98.8	90.3		88.1			
98.5		93.6		75.9		65.2		76.5		6.0	48.3	25.8	99.6	92.1		89.8			
		95.3		77.0		67.3		78.1		6.1	49.4	26.2	100.7	93.8		91.3			
		97.0		77.9		69.5		79.4		6.3	50.7	26.6	101.7	95.6		92.7			
		98.8		78.7		71.6		81.2		6.4	52.1	27.1	102.8	97.3		94.2			
		100.5		79.6		73.5		82.9		6.6	53.8	27.5	104.1			95.4			
		102.1		80.5		75.5		84.5		6.7	55.6	28.2	105.6			96.8			
		103.6		81.5		77.3		85.9		6.8	56.9	28.8	107.4			98.1			
				82.3		79.0		87.4		7.0	58.4	29.3				99.3			
				83.3		80.6		88.8		7.1	59.6	29.9				101.2			
				84.3		82.0		90.3		7.2	60.8	30.4				103.0			
				85.4		83.2		91.8		7.3	62.0	30.9				104.4			
				86.6		84.3		93.0		7.4	63.0	31.4							
				87.6		85.7		94.3		7.6	64.3	32.0							
				88.9		87.1		95.6		7.7	65.4	32.5							
				90.0		88.5		96.9		7.8	66.6	33.3							
				91.1		89.9		98.3		8.0	68.0	33.8							
				92.1		91.6		99.5		8.1	68.9	34.5							
				93.0		93.1		100.8		8.3	70.4	35.2							
				94.1		94.4		102.1		8.4	71.5	35.9							
				95.2		95.8		103.5		8.6	73.0	36.8							
				96.3		97.0		104.8			74.0	37.5							
				97.3				106.1		Auger 24.6 cm	75.4	38.5							
				98.6							76.7	39.6							
				99.5							78.2	40.8							
				100.4							79.3	42.1							
											80.4	43.4							

NOTES:

SG - Subgrade  
SS - Stabilized Subgrade  
CTBC - Cement Treated Base Course

ABC - Aggregate Base Course  
ESG - Estimated Subgrade (DCP blows reported from approximately 1 ft below existing ground surface)





**Dynamic Cone Penetrometer Data Sheet**  
**Project:** 44648.1.4 (R-5777C), Craven County

Location				Location				Location				Location				Location				Location				Location				Location											
LOCATION 9 EB EM				LOCATION 10 EB OES				LOCATION 11 EB OSS				LOCATION 11 EB ISL				LOCATION 11 EB ISS				LOCATION 12 EB OES				LOCATION 13 EB EM				LOCATION 14 EB OES				LOCATION 15 EB OES				LOCATION 16 EB EM			
Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date						
ESG	7/30/19			ESG	7/30/19			SG	7/30/19			SG	7/30/19			ESG	7/30/19			ESG	7/30/19			ESG	7/30/19			ESG	7/30/19			ESG	7/30/19						
Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Fill						
Subgrade	A-2-6			Subgrade	A-6			Subgrade	A-2-6			Subgrade	A-2-4			Subgrade	A-2-4			Subgrade	A-6			Subgrade	A-4			Subgrade	A-6			Subgrade	A-2-6						
Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM			
2.9				1.7				0.7	93.5			1.2	22.9	97.3		2.1	59.6			1.4				2.0				1.3	92.6			2.7							
5.0				3.0				1.3	94.6			1.8	23.2	99.1		3.3	61.0			2.9				3.7				1.9	95.8			5.3							
6.9				4.5				2.0	95.4			2.3	23.7	100.9		4.2	62.3			4.7				5.9				2.9	99.2			8.2							
8.8				5.9				2.6	96.3			3.0	24.1	102.5		5.3	63.8			7.1				8.7				3.7	102.4			11.9							
11.0				9.0				3.2	97.2			3.3	24.6	104.0		6.4	65.5			9.8				11.8				4.5	105.7			15.9							
13.9				12.6				3.8	98.2			3.7	25.0	105.7		8.1	67.5			11.9				15.0				5.5	107.4			18.8							
16.2				17.4				4.3	99.0			4.0	25.4	107.4		10.9	69.5			13.9				19.1				6.6			22.0								
18.5				23.2				4.7	99.8			4.2	26.0	109.0		14.1	71.3			16.2				22.7				7.0			25.1								
21.0				27.8				5.4	100.5			4.4	26.2	110.4		16.7	73.1			19.8				25.8				7.7			27.3								
23.6				36.8				6.1	101.3			4.5	26.6			18.8	75.0			21.3				28.2				8.5			30.5								
25.8				48.2				6.6	102.2			4.7	27.3			20.6	77.1			22.7				30.6				9.2			33.2								
28.1				56.3				7.1	102.9			4.8	27.5			22.6	79.5			24.2				32.8				9.9			36.7								
30.4				62.4				7.8	103.8			5.0	28.0			25.1	81.8			25.8				34.9				10.8			40.4								
32.4				69.0				8.6	104.7			5.3	28.5			26.5	84.3			27.4				37.0				11.6			43.4								
35.5				75.2				9.1	105.5			5.5	29.1			27.3	86.9			29.3				39.2				12.3			46.0								
41.4				80.1				9.7	106.5			5.8	29.7			27.9	89.2			30.9				41.5				13.0			48.7								
44.5				84.4				10.4	107.6			6.0	30.3			28.5	91.5			32.7				43.5				13.8			51.2								
47.9				88.0				11.0	108.8			6.3	30.9			29.0	93.7			34.6				45.7				14.5			53.7								
54.4				91.3				11.6				6.7	31.5			29.5	94.9			37.2				48.2				15.4			56.6								
61.0				94.4				11.9				7.2	32.5			30.0	96.9			40.3				51.5				16.1			59.2								
65.5				97.0				12.6				7.5	32.9			30.6	99.9			45.3				53.4				16.9			61.6								
69.2				99.2				13.4				7.8	34.3			31.0	101.9			51.2				55.3				17.8			63.9								
72.8								14.0				8.0	35.8			31.6	104.0			57.9				58.4				18.5			66.2								
75.7								14.8				8.7	37.6			32.0	105.9			65.2				62.2				19.4			68.4								
78.7								15.8				9.2	38.9			32.5				71.6				65.9				20.7			70.5								
81.5								16.8				9.4	40.4			33.1				76.5				69.0				21.9			72.3								
84.0								17.7				9.8	42.0			33.5				80.6				71.8				23.0			74.2								
86.6								18.7				10.1	44.0			34.0				84.3				74.3				24.3			76.0								
89.0								20.0				10.6	47.0			34.5				88.3				76.7				25.5			77.7								
91.4								21.3				10.7	49.4			35.1				92.9				79.1				26.9			79.2								
93.6								23.8				11.2	52.2			35.4				98.8				81.2				28.5			80.7								
95.8								29.9				11.6	54.6			36.0								83.1				30.6			82.1								
97.9								35.6				11.8	56.3			36.4								84.6				32.8			83.8								
100.0								39.5				12.3	58.1			36.8								86.1				35.0			85.2								
102.0								42.7				12.6	59.7			37.5								88.2				36.4			86.7								
103.8								45.3				12.9	60.7			38.0								90.0				37.8			88.1								
								47.3				13.4	61.6			38.5								91.7				39.1			89.4								
								50.0				13.6	62.4			39.1								93.6				40.6			91.2								
								53.4				14.0	63.0			39.6								95.4				42.2			92.7								
								56.5				14.6	63.9			40.2								97.3				43.5			94.2								
								59.3				14.9	65.0			40.8								99.7				45.0			95.6								
								61.8				15.4	65.8			41.3								102.1				46.4			97.0								
								64.0				15.8	67.0			42.0								104.5				47.8			98.4								
								66.1				16.0	68.1			42.5								106.1				49.3			99.7								
								68.0				16.5	69.1			43.2												50.8			101.3								
								69.8				16.8	70.1			44.0												52.7											
								71.4				17.0	71.1			44.9												54.9											
								73.2				17.4	72.2			45.5												57.1											
								74.8				17.7	73.4			46.4												59.4											
								76.2				18.1	74.7			47.1												61.3											
								77.5				18.5	76.0			48.1												63.7											
								78.9				18.8	77.5			49.2												65.9											
								80.2				19.1	79.1			50.1												67.8											
								81.6				19.6	80.8			51.0												70.0											
								82.9				20.0	82.2			52.0												72.3											
								84.3				20.4	83.8			53.0												74.6											
								85.6				20.7	85.5			54.1												76.6											
								87.0				21.1	87.3			55.0												78.8											
								88.4				21.5	89.2			55.8												81.1											
								89.7				21.8	91.2			56.7												83.8											
								91.0				22.2	93.3			57.6												86.7											
								92.4				22.7	95.3			58.6												89.4											

**NOTES:**

SG - Subgrade  
SS - Stabilized Subgrade  
CTBC - Cement Treated Base Course

ABC - Aggregate Base Course  
ESG - Estimated Subgrade (DCP blows reported from approximately 1 ft below existing ground surface)



**Dynamic Cone Penetrometer Data Sheet**  
**Project:** 44648.1.4 (R-5777C), Craven County

Location				Location				Location				Location				Location				Location				Location				Location											
LOCATION 17 EB OES				LOCATION 18 EB EM				LOCATION 19 EB OSS				LOCATION 19 EB OSL				LOCATION 19 EB ISS				LOCATION 20 EB OES				LOCATION 21 EB EM				LOCATION 22 EB OES				LOCATION 23 EB OES				LOCATION 24 EB EM			
Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date					
ESG		7/30/19		ESG		7/30/19		SG		7/30/19		N/A		7/30/19		SG		7/30/19		ESG		7/30/19		ESG		7/27/19		ESG		7/27/19		ESG		7/27/19					
Cut/Fill		Fill		Cut/Fill		Grade		Cut/Fill		Grade		Cut/Fill		Grade		Cut/Fill		Grade		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill					
Subgrade		A-6		Subgrade		A-2-4		Subgrade		A-6		Subgrade				Subgrade		A-6		Subgrade		A-6		Subgrade		A-6		Subgrade		A-6		Subgrade		A-2-4					
Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM			
2.6				2.6				2.8				NOT PERFORMED				2.9				1.2				0.6				4.1				3.5				7.4			
12.1				4.4				4.8							4.9				1.9				1.0				10.1				8.8				19.1				
14.1				6.8				6.6							7.3				2.7				1.5				14.1				19.9				29.4				
16.6				10.4				8.4							10.4				3.9				1.9				20.1				30.2				37.5				
21.3				14.7				10.3							15.7				5.2				2.6				24.9				40.9				47.6				
24.7				18.9				12.5							19.7				6.6				3.1				33.3				43.5				56.2				
28.3				24.1				14.6							25.9				7.9				3.7				39.4				44.8				63.8				
35.8				30.2				16.7							30.4				9.7				4.5				44.0				46.3				70.0				
43.4				36.2				18.8							36.5				11.7				4.9				47.4				52.7				75.2				
50.7				42.4				21.8							39.8				14.0				5.5				53.9				58.2				79.8				
55.7				47.4				24.1							44.3				16.3				5.8				61.7				62.8				84.3				
59.8				52.4				26.1							53.9				18.2				6.2				67.2				67.2				88.2				
63.6				57.0				28.1							61.9				20.2				6.7				71.7				71.8				72.9				
67.0				61.0				30.2							67.6				22.7				7.1				75.7				75.7				76.6				
70.3				64.4				32.5							72.7				25.6				7.3				79.0				80.3								
73.5				68.0				35.0							77.5				27.8				7.5				82.8				84.7								
76.6				71.0				37.1							81.5				30.0				8.1				87.4				88.8								
79.5				74.2				39.6							84.8				32.4				8.4				87.8				93.6								
82.4				77.0				42.2							88.1				34.9				8.9				91.3				97.8								
85.1				79.7				45.2							90.6				38.9				9.2				96.0												
87.6				82.1				49.5							93.0				43.7				9.7				100.1												
90.2				84.5				55.8							95.5				46.2				9.9																
92.5				86.8				60.3							98.0				49.2				10.4																
94.9				88.9				64.1							100.2				53.3				10.9																
97.3				90.7				67.4							102.7				57.1				11.4																
99.3				92.5				70.5							104.8				60.3				11.9																
101.4				94.2				73.2							106.9				63.7				12.4																
				96.1				75.7											67.3				12.9																
				97.5				78.4											70.6				13.2																
				99.1				81.1											73.6				13.6																
				100.5				83.6											76.3				14.2																
				101.7				85.8											79.2				14.6																
								89.7											81.8				15.0																
								91.7											84.1				15.3																
								93.8											86.5				15.8																
								96.2											88.8				16.3																
								98.3											90.8				16.6																
								100.5											93.0				17.0																
								102.7											95.2				17.5																
								105.2											97.3				17.9																
								108.9											99.3				18.3																
								111.6											101.2				18.8																
																			103.0				19.2																
																			104.7				19.7																
																			106.6				20.1																
																			110.3				20.5																
																						21.0																	
																						21.4																	
																						21.6																	
																						22.2																	
																						22.7																	
																						22.9																	
																						23.2																	
																						23.5																	
																						23.7																	
																						23.9																	
																						24.2																	
																						24.4																	
																						24.6																	
																						24.7																	
																						25.6																	
																						26.2																	

**NOTES:**

SG - Subgrade  
SS - Stabilized Subgrade  
CTBC - Cement Treated Base Course

ABC - Aggregate Base Course  
ESG - Estimated Subgrade (DCP blows reported from approximately 1 ft below existing ground surface)



**Dynamic Cone Penetrometer Data Sheet**  
**Project:** 44648.1.4 (R-5777C), Craven County

Location				Location				Location				Location				Location				Location				Location				Location											
LOCATION 25 EB OES				LOCATION 26 EB OSS				LOCATION 26 EB OSL				LOCATION 26 EB ISS				LOCATION 27 EB OES				LOCATION 28 EB EM				LOCATION 29 EB OES				LOCATION 30 EB EM				LOCATION 31 EB OES				LOCATION 32 EB EM			
Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date					
ESG		7/27/2019		SG		7/27/2019		SG		7/27/2019		ESG		7/27/2019		ESG		7/27/2019		ESG		7/27/2019		ESG		7/27/2019		ESG		7/27/2019		ESG		7/27/2019					
Cut/Fill		Grade		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill					
Subgrade		A-6		Subgrade		A-4		Subgrade		A-4		Subgrade		A-4		Subgrade		A-2-4		Subgrade		A-2-4		Subgrade		A-2-4		Subgrade		A-2-4		Subgrade		A-2-4					
Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM			
1.4				7.4				4.4				2.6				3.9				2.3				3.2				3.1				1.8				3.5			
3.5				11.3				10.7				4.3				8.1				4.4				7.3				7.1				4.1				6.6			
5.6				15.6				25.3				6.5				12.7				7.0				10.3				10.7				6.2				10.2			
8.7				27.2				32.9				10.8				16.0				9.8				12.6				13.1				8.8				13.8			
12.8				56.1				37.9				17.9				17.6				12.6				15.1				15.4				11.5				18.2			
17.6				63.3				42.2				26.1				19.4				16.1				19.1				17.4				13.3				23.9			
24.7				68.3				45.8				41.7				21.8				18.6				23.7				19.6				15.1				33.4			
33.3				72.0				49.1				50.4				24.0				21.1				30.7				22.1				16.5				36.7			
42.3				75.3				52.1				56.2				25.9				23.9				37.9				24.0				17.9				38.7			
49.7				78.2				55.1				61.4				28.2				26.2				43.1				26.1				20.1				40.7			
50.3				81.0				57.9				66.7				30.8				28.3				46.9				27.8				24.6				42.7			
50.8				83.4				60.4				74.7				32.5				30.9				47.9				29.9				31.9				44.8			
51.0				85.9				62.5				81.1				34.1				33.1				48.6				31.7				38.1				47.2			
51.2				88.3				64.5				85.4				36.1				35.3				49.8				33.5				43.2				49.3			
51.6				90.8				66.7				89.2				38.2				38.2				53.8				35.2				47.7				52.1			
56.1				93.7				69.1				93.7				40.2				41.0				57.5				36.9				50.5				55.4			
59.9				96.4				71.1				96.7				41.8				43.7				60.7				38.4				53.4				62.4			
63.5				99.4				73.2				99.9				44.0				46.4				63.3				40.1				56.5				68.1			
66.9				102.3				75.3				102.7				45.6				49.0				65.8				41.5				59.5				72.1			
70.0				105.0				77.3				105.3				47.5				51.6				68.3				42.8				62.5				75.6			
72.7												107.7				48.8				53.9				70.4				44.0				65.1				78.7			
75.1												110.0				49.9				55.8				72.4				45.1				67.3				81.3			
77.6																51.2				57.2				74.3				46.0				69.6				83.9			
79.9																52.2				58.8				76.2				47.3				71.6				86.2			
82.2																53.4				60.8				77.9				48.5				73.4				88.4			
84.4																54.3				62.9				79.7				49.6				75.4				90.5			
86.8																55.4				65.1				81.5				50.3				76.8				92.5			
88.9																56.6				67.0				83.0				51.8				78.4				94.5			
91.0																57.5				68.8				84.4				53.3				80.1				96.3			
93.4																58.3				70.6				86.0				55.1				81.7				98.1			
95.4																59.3				72.3				87.4				57.2				83.1				99.8			
97.3																60.2				74.0				89.0				59.7				84.6							
99.5																62.1				75.6				90.5				64.1				85.9							
101.7																63.5				77.1				92.1				66.8				87.3							
106.7																65.6				78.6				93.5				68.9				88.5							
																69.2				80.1				94.9				70.4				89.8							
																73.5				81.6				96.4				71.9				91.3							
																77.2				82.9				97.8				73.7				92.3							
																80.4				84.3				99.3				74.8				93.7							
																83.2				85.5				100.9				76.3				94.9							
																85.8				86.8							78.0				96.3								
																88.3				88.0							79.9												
																90.4				89.1							82.2												
																92.6				90.4							84.7												
																94.4				91.6							87.2												
																96.6				92.8							89.7												
																98.6				93.8							91.9												
																100.3				94.9							94.2												
																				96.0							96.9												
																				97.0							99.3												
																				98.4																			
																				99.7																			

**NOTES:**

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**Dynamic Cone Penetrometer Data Sheet**  
**Project:** 44648.1.4 (R-5777C), Craven County

Location				Location				Location				Location				Location				Location				Location				Location											
LOCATION 33 EB OSS				LOCATION 33 EB ISL				LOCATION 33 EB ISS				LOCATION 34 EB OES				LOCATION 35 EB EM				LOCATION 36 EB OES				LOCATION 37 OES				LOCATION 38 EB EM				LOCATION 39 EB OES				Location 40 EB EM			
Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date					
SG		7/27/19		SG		7/27/19		SG		7/27/19		ESG		7/27/19		ESG		7/27/19		ESG		7/27/19		ESG		7/27/19		ESG		7/27/19		ESG		7/26/19					
Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Grade		Cut/Fill		Grade		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill					
Subgrade		A-4		Subgrade		A-2-4		Subgrade		A-2-4		Subgrade		A-2-4		Subgrade		A-2-4		Subgrade		A-2-4		Subgrade		A-2-4		Subgrade		A-2-4		Subgrade		A-2-6					
Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM			
2.4				2.7				1.8	103.7			4.5				2.0				1.9				4.8				1.5				2.5							
4.6				3.7				3.5	104.8			10.5				4.0				3.6				9.7				3.5				6.0							
6.6				4.7				5.7	106.0			20.8				5.9				5.6				13.7				5.7				11.5							
9.4				5.7				7.9	107.3			35.0				8.1				7.3				22.0				8.2				17.6							
12.2				6.8				9.7	108.4			58.3				11.3				9.3				31.7				10.2				24.0							
14.9				7.7				11.5	109.7			65.5				14.6				11.4				54.9				12.9				31.0							
17.8				8.6				13.2	110.7			69.3				17.2				13.8				71.2				15.8				36.0							
21.6				9.7				15.2				72.1				20.8				17.4				73.9				18.6				42.2							
27.1				10.8				17.0				78.2				23.5				22.5				77.6				21.2				45.6							
33.8				12.3				18.6				81.1				26.3				26.3				80.4				24.2				50.0							
40.4				13.9				20.2				83.5				29.9				29.4				82.4				27.3				54.4							
48.9				16.3				22.6				85.7				33.7				33.0				85.0				30.1				60.3							
54.8				18.3				25.4				88.1				36.5				36.3				86.9				33.4				66.2							
59.1				20.3				27.3				90.0				39.5				39.5				88.9				36.6				70.9							
62.5				22.6				29.0				91.8				44.3				45.6				91.3				42.3				74.9							
66.2				25.3				30.3				93.8				50.3				50.8				93.8				46.7				78.4							
69.8				32.8				31.8				95.6				55.5				56.5				97.4				52.8				81.2							
72.8				39.9				33.1				97.3				60.1				61.9				100.3				58.3				83.6							
75.3				44.4				34.2				99.2				64.0				65.6								62.9				85.9							
77.7				47.6				35.2				101.0				67.2				68.3								66.6				88.0							
79.8				50.5				36.1				102.4				70.1				70.4								70.0				90.0							
82.3				53.3				37.2				104.2				73.0				72.4								73.0				92.0							
84.2				56.2				38.1				106.0				75.2				74.1								75.7				93.9							
86.2				58.9				39.3				107.7				77.7				76.0								78.5				95.6							
88.6				61.3				40.1								79.9				77.6								81.3				97.4							
90.6				63.3				41.1								82.0				79.3								83.3				99.0							
92.6				65.3				42.1								84.0				80.6								85.4					79.7						
94.7				67.9				42.9								85.9				81.8								88.7					81.2						
96.8				70.5				43.3								87.7				83.1								90.6					82.5						
98.8				73.3				44.4								89.5				84.8								92.5					83.9						
100.6				75.8				45.5								90.1				86.9								94.4					85.2						
102.2				78.0				46.6								92.6				89.1								96.2					86.5						
104.0				80.1				47.3								94.3				90.5								97.8					87.5						
105.6				81.8				49.1								95.8				93.7								99.4					88.8						
106.9				83.4				51.2								97.2				96.0													90.1						
108.0				84.9				54.1								98.9				98.1													91.3						
109.4				86.3				57.4								100.6				99.9													93.2						
110.8				87.7				60.5																										94.1					
				89.2				63.2																										95.3					
				90.4				65.8																										96.5					
								68.3																											97.5				
								70.6																											98.5				
								72.9																											99.8				
								74.8																											101.0				
								76.9																											102.3				
								78.5																											103.5				
								80.4																															
								82.1																															
								83.8																															
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								86.9																															
								88.5																															
								90.0																															
								91.6																															
								92.9																															
								94.3																															
								95.7																															
								97.0																															
								98.3																															
								99.7																															
								101.1																															
								102.4																															

**NOTES:**

SG - Subgrade  
SS - Stabilized Subgrade  
CTBC - Cement Treated Base Course

ABC - Aggregate Base Course  
ESG - Estimated Subgrade (DCP blows reported from approximately 1 ft below existing ground surface)



Dynamic Cone Penetrometer Data Sheet  
Project: 44648.1.4 (R-5777C), Craven County

Location				Location				Location				Location				Location				Location				Location				Location				Location							
LOCATION 41 EB OSS				LOCATION 41 EB ISS				LOCATION 42 EB OES				LOCATION 43 EB EM				LOCATION 44 EB OES				LOCAITON 45 EB OES				LOCATION 46 EB EM				LOCATION 47 EB OES				LOCATION 48 EB ISL				LOCATION 48 EB OSS			
Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date						
SG	7/26/19			SG	7/26/19			ESG	7/26/19			ESG	7/26/19			ESG	7/26/19			ESG	7/26/19			ESG	7/26/19			ESG	7/26/19			SG	7/26/19						
Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Grade			Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill	Fill						
Subgrade	A-2-4			Subgrade	A-2-4			Subgrade	A-2-4			Subgrade	A-2-4			Subgrade	A-2-4			Subgrade	A-2-6			Subgrade	A-2-4			Subgrade	A-2-4			Subgrade	A-2-4						
Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM			
2.4				1.7				1.6				2.0				1.0				1.6				1.6				1.8				0.6	19.3	67.9		0.9	70.5		
4.0				2.8				4.5				5.3				2.6				3.5				4.2				5.1				1.1	19.6	69.3		1.8	71.9		
5.6				4.0				7.0				9.8				4.7				5.8				6.6				9.0				1.4	19.7	70.5		2.6	73.3		
7.3				5.4				9.6				22.2				6.8				8.8				9.3				12.1				1.8	20.2	72.2		3.4	74.6		
8.9				6.5				12.9				38.2				9.3				11.8				12.1				15.7				2.1	20.7	73.7		4.7	75.8		
10.5				8.2				17.7				54.5				11.7				14.7				15.6				18.2				2.6	21.0	74.9		5.9	77.1		
12.2				9.5				21.8				65.6				14.0				16.1				17.4				20.2				2.9	21.4	76.4		7.5	78.2		
13.7				11.2				29.7				74.6				17.3				17.2				18.7				22.1				3.1	21.7	78.2		8.6	79.1		
14.9				13.1				35.6				82.1				20.2				18.3				19.8				23.9				3.3	22.1	79.9		9.6	79.8		
16.0				15.9				41.7				86.9				23.5				19.2				20.9				25.4				3.6	22.3	81.7		10.9	80.6		
17.2				18.7				49.1				92.0				30.6				20.1				22.0				26.7				3.7	22.7	83.3		12.3	81.8		
18.7				20.9				59.2				96.2				38.2				21.2				23.6				27.9				3.9	22.9	85.1		13.6	82.4		
20.5				23.1				66.8				100.1				45.0				22.3				25.8				29.2				4.1	23.4	86.9		14.8	83.5		
22.6				25.5				71.8								50.3				23.6				30.1				30.4				4.3	23.9	88.4		16.0	84.2		
24.8				28.5				75.3								54.7				25.3				32.6				31.6				4.6	24.3	90.1		17.0	85.2		
29.6				34.0				78.4								58.1				27.4				34.7				33.3				4.9	24.7	91.7		18.3	86.3		
37.3				42.2				81.0								61.4				29.7				35.9				34.4				5.4	25.0	93.3		19.7	87.3		
45.0				48.9				83.5								64.3				33.2				37.0				36.0				5.6	25.5	94.8		21.1	88.3		
51.3				54.3				85.9								66.8				37.0				37.8				37.9				5.8	26.1	96.2		22.7	89.8		
56.2				58.7				88.0								69.3				40.5				39.7				40.1				6.0	26.6	97.7		23.8	90.7		
60.3				62.6				90.2								71.9				43.7				39.7				44.1				6.2	27.0	99.0		25.0	92.0		
63.6				66.0				92.0								74.3				46.7				41.0				48.9				6.4	27.5	100.1		26.4	93.1		
66.7				69.0				93.8								76.5				49.4				41.8				53.0				6.6	28.0	101.2		27.9	94.2		
69.8				72.2				95.7								78.8				51.8				42.9				57.0				7.4	28.5	102.2		29.7	95.5		
72.3				75.3				97.5								81.0				53.9				43.8				60.8				7.7	28.9	103.0		30.8	96.5		
75.1				78.3				99.1								83.3				56.0				44.9				64.3				7.8	29.4	104.1		32.0	97.7		
77.7				81.0				100.7								85.3				58.1				45.9				67.3				8.0	29.9	105.2		33.0	98.8		
80.1				83.6												87.2				60.3				47.2				70.3				8.3	30.4	106.3		34.2	100.3		
82.3				85.9												89.1				62.4				48.7				73.2				8.5	31.0	107.3		35.3	101.3		
84.7				88.3												91.1				64.4				51.1				75.9				8.8	31.5	108.3		36.3	103.0		
86.9				90.4												93.0				66.5				54.1				78.5				9.0	32.0			37.8	103.9		
89.1				92.6												94.9				68.5				57.5				81.1				9.2	32.4			38.9	105.3		
91.2				94.3												96.9				70.4				60.8				83.9				9.7	33.1			39.9	106.2		
93.2				96.0												98.8				72.3				64.1				86.6				10							



Dynamic Cone Penetrometer Data Sheet  
Project: 44648.1.4 (R-5777C), Craven County

Location				Location				Location				Location				Location				Location				Location				Location															
LOCATION 48 EB ISS				LOCATION 49 EB OES				LOCATION 50 EB EM				LOCATION 51 EB OES				LOCATION 52 EB OES				LOCATION 53 EB EM				LOCATION 54 EB OES				LOCATION 55 EB EM				LOCATION 56 EB OSS				LOCATION 56 EB OSL							
Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date		Datum		Date									
SG		7/26/19		ESG		7/26/19		ESG		7/26/19		ESG		7/25/19		ESG		7/26/19		ESG		7/25/19		ESG		7/26/19		SG		7/25/19		SG		7/27/19									
Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill		Cut/Fill		Fill									
Subgrade		A-2-4		Subgrade		A-2-4		Subgrade		A-2-6		Subgrade		A-2-4		Subgrade		A-2-6		Subgrade		A-2-4		Subgrade		A-6		Subgrade		A-2-6		Subgrade		A-2-4		Subgrade		A-2-4					
Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM			
3.0	77.9			1.5				3.8	93.4			3.5	97.8			1.2				2.0				2.1	79.9			2.2				0.9	103.8			0.8	0.4	43.4					
4.5	80.0			2.7				7.5	94.4			5.2	99.1			2.8				4.0				2.9	80.6			5.1				2.2	105.8			1.2	0.8	43.7					
5.8	81.8			4.2				10.3	95.7			7.0	100.3			3.8				5.8				4.3	81.3			8.3				3.2	107.2			1.7	1.2	44.4					
6.6	83.6			5.6				12.3	96.8			8.8	101.4			5.3				7.5				5.8	82.0			12.5				4.2				1.8	1.6	45.1					
7.6	85.5			7.0				14.3	98.8			10.2				6.6				9.1				7.7	82.7			17.4				5.3				2.3	2.0	45.9					
8.7	87.4			8.4				16.5	100.9			11.8				8.1				10.8				9.3	83.5			22.7				6.5				2.7	2.5	47.0					
9.4	89.2			10.1				19.1	103.5			13.7				9.8				12.4				10.6	84.4			24.9				8.0				2.9	3.0	48.3					
10.6	90.9			11.8				21.6				15.8				12.0				14.2				11.9	85.2			26.8				10.2				3.2	3.4	49.8					
11.4	93.0			13.7				26.0				17.7				14.4				15.9				12.9	86.1			28.8				11.8				3.3	4.1	51.3					
12.3	94.9			16.0				32.8				19.7				16.8				17.5				14.1	87.0			30.6				13.0				3.6	4.6	52.9					
13.2	96.6			18.1				35.4				21.5				18.7				19.4				15.4	88.0			32.9				14.3				3.8	5.1	54.6					
14.0	98.2			20.1				36.9				22.8				19.9				21.2				16.9	89.0			36.5				15.5				4.1	5.8	56.5					
14.9	100.1			22.0				38.4				24.5				21.2				22.9				18.2	89.8			39.1				16.8				4.3	6.6	58.5					
15.7	102.1			24.1				40.4				26.8				23.0				24.8				19.4	90.6			40.9				18.1				4.6	7.2	60.6					
16.6	103.9			26.3				42.4				29.1				25.6				26.7				20.8	91.5			42.8				19.6				4.8	8.0	62.5					
17.5	105.8			28.6				43.6				31.4				28.8				28.8				22.9	92.4			44.4				21.1				5.0	8.8	64.6					
18.3	107.6			30.7				45.0				33.9				33.0				32.8				24.1	93.2			46.0				22.6				5.3	9.8	66.5					
19.3	109.5			32.9				46.5				37.0				38.5				36.3				25.8	94.0			47.5				23.9				5.5	11.3	68.4					
20.3	110.2			34.9				48.0				40.5				44.9				38.1				27.5	94.8			48.9				24.9				5.6	12.5	70.3					
21.4	112.9			36.7				50.2				44.5				51.1				40.0				29.1	95.5			50.0				26.1				5.9	13.6	72.0					
22.7				38.7				51.9				47.7				56.5				41.4				30.8	96.2			51.1				27.1				6.0	14.5	74.0					
24.2				40.7				53.2				50.2				60.4				42.7				32.6	96.8			52.2				28.0				6.1	15.4	76.0					
25.7				42.7				54.6				52.7				64.0				44.3				34.5	97.5			53.2				29.0				6.3	16.2	78.1					
26.7				45.7				56.2				54.2				67.4				46.0				36.4	98.3			54.3				30.0				6.4	17.0	80.3					
27.7				48.9				57.7				56.0				70.1				48.4				38.3	98.8			55.3				31.1				6.5	17.6	82.7					
28.7				51.7				59.0				57.5				73.0				52.7				39.9	99.6			56.1				32.5				6.6	18.3						
29.5				54.4				60.4				58.3				75.0				56.4				41.3	100.4			56.9				34.2				6.7	19.1						
30.4				56.7				61.4				59.1				77.0				59.6				42.8	101.3			58.3				36.3				6.9	20.1						
31.0				58.4				62.3				60.0				79.6				61.4				44.4	102.0			60.0				39.4				7.0	21.0						
31.7				59.5				63.4				60.8				82.4				62.8				45.5	102.9			61.6				41.5				7.1	22.1						
32.3				60.7				64.3				61.7				84.9				64.3				46.9	103.8			63.4				43.2				7.2	23.4						
33.0				61.7				65.3				62.6				86.8				65.9				48.0			65.1				45.2				7.4	24.9							
33.6				62.7				66.3				63.5				88.6				67.8				49.3			66.8				47.7				7.5	26.4							
34.3				63.8				67.0				64.5				90.9				69.5				50.2			68.6				50.8				7.7	28.1							
35.1				64.6				67.9				65.8				93.2				71.2				51.2			70.3				53.0				7.8	29.2							
35.8				65.5				68.7				67.0				95.8				72.8				52.4			71.9				54.6				7.9	30.1							
36.7				66.4				69.4				68.4				98.1				74.4				53.5			73.4		</														



Dynamic Cone Penetrometer Data Sheet  
Project: 44648.1.4 (R-5777C), Craven County

Location				Location				Location				Location				Location				Location				Location				Location			
LOCATION 56 EB ISS				LOCATION 57 EB OES																				LOCATION 15 EB OES							
Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date			Datum	Date		
SG	7/26/19			ESG	7/27/19																										
Cut/Fill	Fill			Cut/Fill	Fill			Cut/Fill				Cut/Fill				Cut/Fill				Cut/Fill				Cut/Fill				Cut/Fill			
Subgrade	A-2-6			Subgrade	A-2-4			Subgrade				Subgrade				Subgrade				Subgrade				Subgrade				Subgrade			
Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM				Cumulative DCP Blows in CM			
2.2				2.0																											
4.3				3.8																											
5.9				5.3																											
7.5				7.3																											
9.3				10.1																											
10.9				13.9																											
12.3				17.0																											
14.2				20.1																											
15.8				23.6																											
17.7				26.6																											
19.8				28.4																											
21.6				29.9																											
23.3				31.2																											
25.9				32.9																											
29.2				34.6																											
31.0				36.6																											
32.8				39.0																											
35.4				42.2																											
37.5				45.2																											
39.7				47.9																											
41.6				50.6																											
43.2				52.9																											
44.7				55.4																											
46.2				57.8																											
47.6				60.0																											
48.6				62.1																											
49.6				64.2																											
50.4				66.2																											
51.1				68.0																											
51.7				70.0																											
52.6				71.9																											
53.4				73.7																											
54.6				75.6																											
56.0				77.9																											
58.0				79.8																											
60.7				81.8																											
63.0				83.5																											
65.1				85.2																											
66.6				87.1																											
68.0				88.8																											
69.4				90.5																											
70.9				92.4																											
72.5				94.2																											
74.4				95.9																											
76.2				97.9																											
78.0				99.7																											
79.7				101.6																											
81.4				103.5																											
83.0																															
84.5																	</														

NOTES:

SG - Subgrade  
SS - Stabilized Subgrade  
CTBC - Cement Treated Base Course

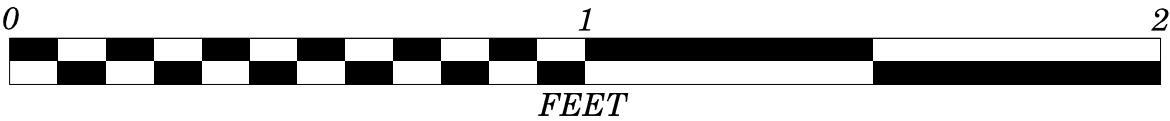
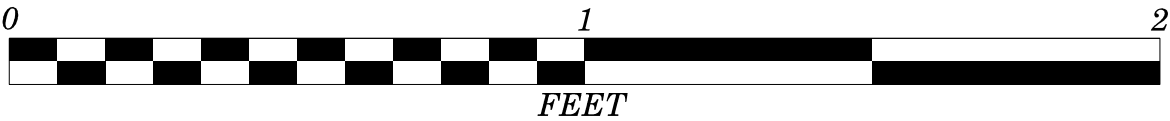
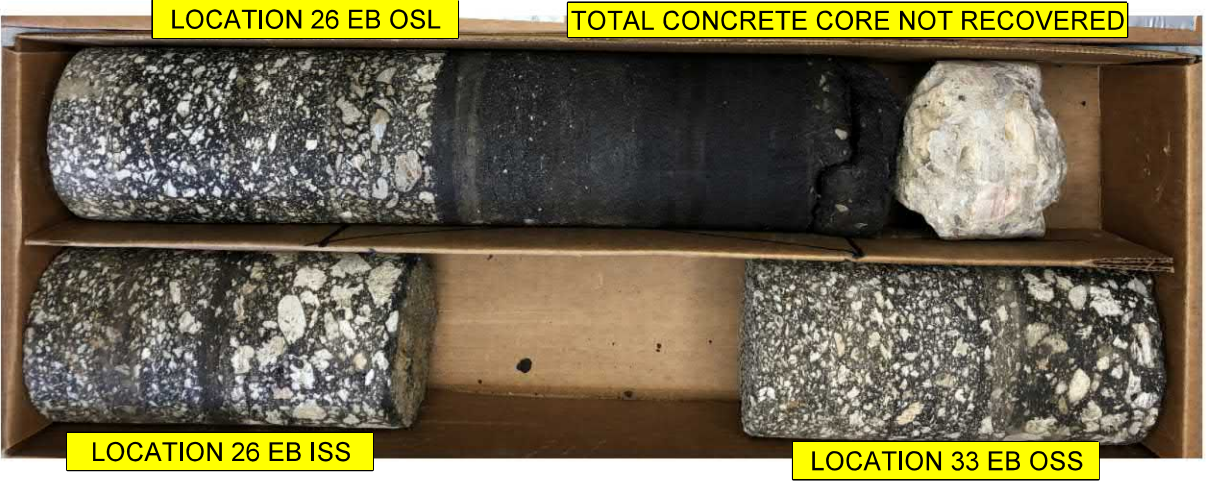
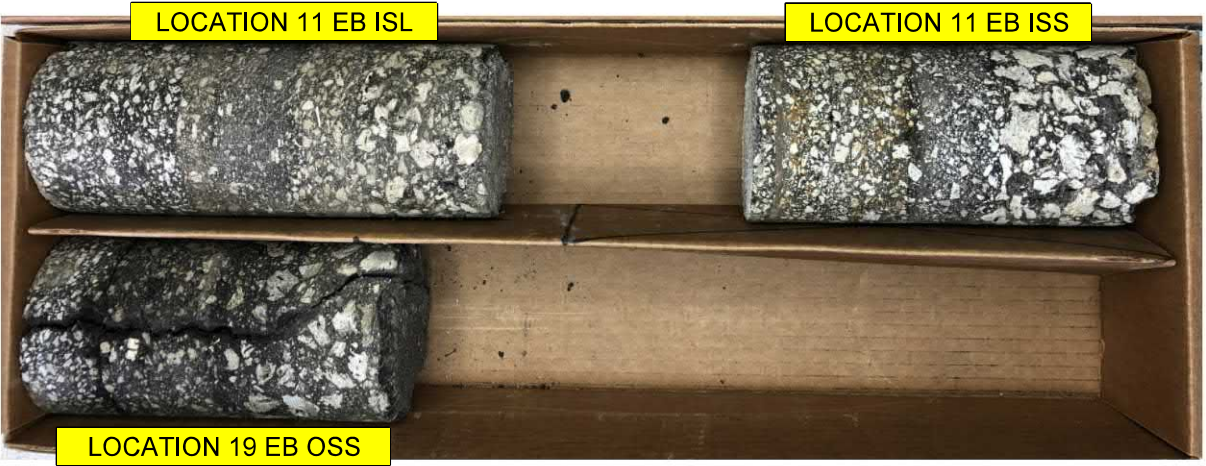
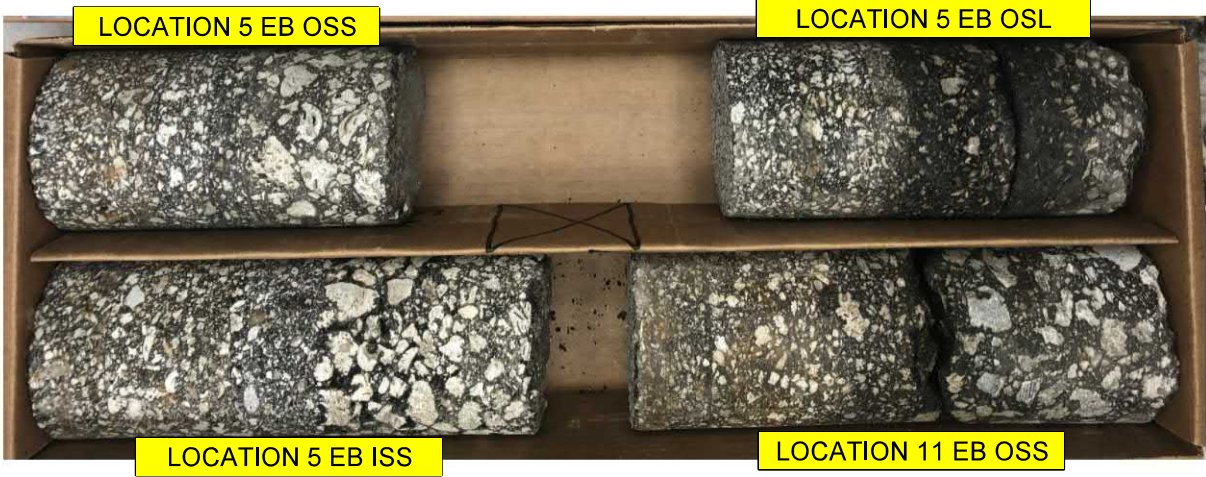
ABC - Aggregate Base Course  
ESG - Estimated Subgrade (DCP blows reported from approximately 1 ft below existing ground surface)





PAVEMENT CORE PHOTOGRAPHS  
US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - EASTBOUND

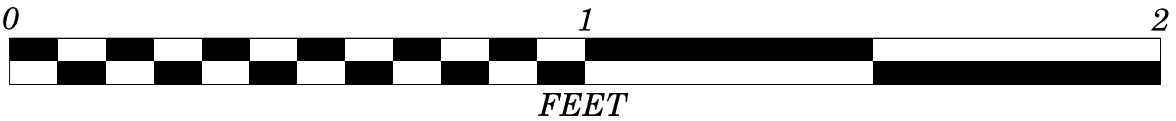
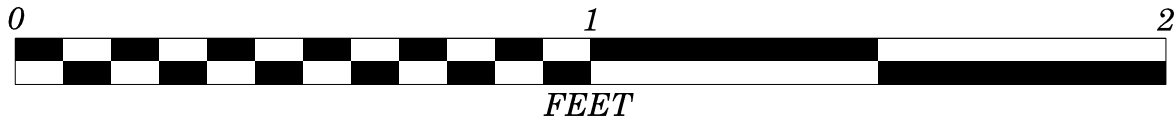
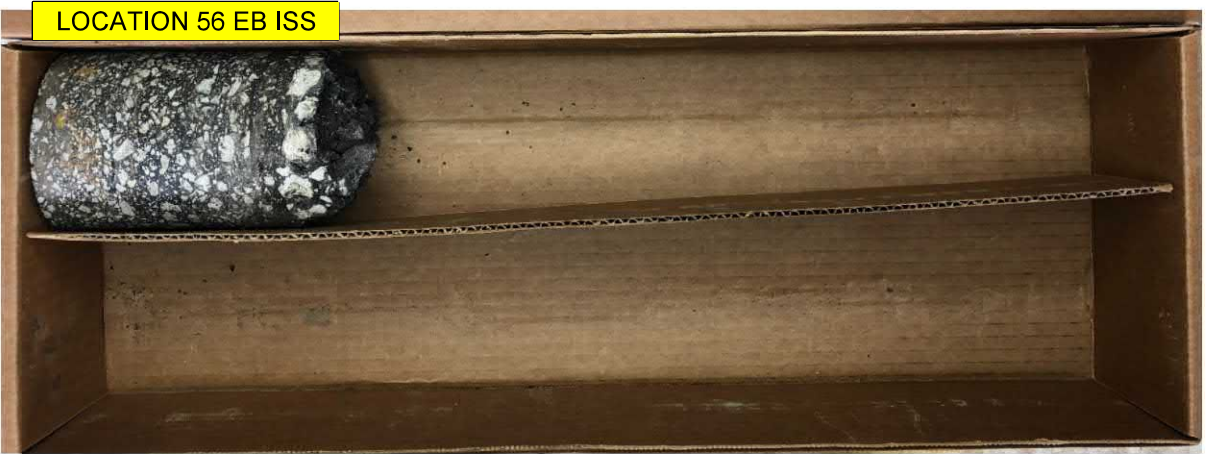
PROJECT REFERENCE NO.	SHEET NO.
R-5777C	71





PAVEMENT CORE PHOTOGRAPHS  
US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS - EASTBOUND

PROJECT REFERENCE NO.	SHEET NO.
R-5777C	72





LABORATORY TESTING SUMMARY

PROJECT NUMBER: 44648.1.4

TIP: R-5777C

COUNTY: CRAVEN

DESCRIPTION: US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS

Sample No.	Station	Alignment	Location	Offset (feet)	Depth Interval (feet)	AASHTO Class.	L.L.	P.I.	% by Weight				% Retained #4 Sieve	% Passing (sieves)			% Moisture	% Organic
									Coarse Sand	Fine Sand	Silt	Clay		#10	#40	#200		
B-1*	LOCATION 3	- L -	WB EM	5.0 FY LT	0.0 - 4.0	A-2-4 (0)	27	8	17.4	59.9	5.9	16.8	0	99	92	25	--	--
B-2*	LOCATION 30	- L -	WB OES	6.0 FW RT	0.0 - 4.0	A-2-4 (0)	NP	NP	19.3	66.2	2.6	11.9	0	99	90	17	--	--
B-3*	LOCATION 52	- L -	WB OES	6.0 FW RT	0.0 - 3.0	A-2-4 (0)	32	10	17.4	63.3	5.2	14.1	1	98	90	23	--	--
B-4*	LOCATION 41	- L -	EB EM	6.0 FY RT	0.0 - 4.0	A-2-4 (0)	27	8	17.8	53.3	11.6	17.3	1	98	89	35	--	--
B-5*	LOCATION 20	- L -	EB EM	6.0 FY RT	0.0 - 4.0	A-2-4 (0)	24	4	15.7	66.5	3.0	14.8	0	100	93	19	--	--
S-1	LOCATION 2	- L -	WB OES	6.0 FW RT	3.5 - 6.0	A-6 (7)	35	23	0.0	49.8	11.2	39.0	0	96	96	50	28.3	--
S-2	LOCATION 4	- L -	WB OES	6.0 FW RT	3.5 - 6.0	A-2-4 (0)	23	8	3.5	66.7	8.9	20.9	0	100	99	33	--	--
S-3	LOCATION 7	- L -	WB OES	6.0 FW RT	1.0 - 3.5	A-6 (8)	35	23	3.7	46.9	12.7	36.7	1	99	97	52	24.4	--
S-4	LOCATION 8	- L -	WB OSS	2.0 FW RT	2.5 - 6.0	A-6 (12)	40	26	0.9	42.8	16.4	39.9	0	100	100	60	21.7	--
S-5	LOCATION 11	- L -	WB OES	4.0 FW RT	1.0 - 2.5	A-2-6 (0)	26	12	16.9	57.3	7.4	18.4	2	96	90	28	--	--
S-6	LOCATION 15	- L -	WB OSL	3.0 FW LT	1.0 - 2.0	A-2-4 (0)	16	5	35.5	29.2	10.6	24.7	13	70	54	26	--	--
S-7	LOCATION 19	- L -	WB OES	6.0 FW RT	2.0 - 6.0	A-6 (3)	26	12	0.0	54.8	17.5	27.7	0	100	100	53	16.2	--
S-8	LOCATION 1	- L -	WB ISS	2.0 FW LT	0.8 - 3.0	A-6 (3)	30	16	1.4	55.8	10.9	31.9	0	100	100	45	19.8	--
S-9	LOCATION 8	- L -	WB ISS	2.0 FY LT	3.0 - 6.0	A-7-6 (23)	51	35	0.0	33.6	15.4	51.0	0	100	100	70	28.7	--
S-10	LOCATION 10	- L -	WB EM	7.0 FY LT	3.5 - 6.0	A-2-4 (0)	20	4	3.9	66.5	13.0	16.6	0	100	98	35	--	--
S-11	LOCATION 21	- L -	WB OES	6.0 FW RT	4.0 - 6.0	A-6 (3)	28	14	1.9	57.0	14.5	26.6	0	100	99	49	13.2	--
S-12	LOCATION 23	- L -	WB OSS	2.0 FW RT	1.0 - 2.5	A-2-4 (0)	16	3	22.5	49.5	8.6	19.4	9	83	73	25	--	--
S-13	LOCATION 26	- L -	WB OES	6.0 FW RT	3.5 - 6.0	A-6 (14)	38	22	0.0	35.0	19.2	45.8	0	100	100	71	27.6	--
S-14	LOCATION 29	- L -	WB OSS	2.0 FW RT	0.7 - 3.5	A-2-4 (0)	20	7	29.9	34.9	15.6	19.6	15	71	58	28	--	--
S-15	LOCATION 29	- L -	WB OSL	1.5 FW LT	3.0 - 6.0	A-6 (15)	36	24	0.0	35.3	24.6	40.1	0	99	99	74	27.2	--
S-16	LOCATION 30	- L -	WB OES	6.0 FW RT	1.0 - 3.5	A-2-4 (0)	21	5	15.0	64.3	4.9	15.8	0	99	94	23	--	--
S-17	LOCATION 33	- L -	WB OES	6.0 FW RT	4.0 - 6.0	A-6 (7)	28	14	3.0	40.5	31.4	25.1	0	99	98	67	24.6	--
S-18	LOCATION 20	- L -	WB EM	6.0 FY LT	1.0 - 3.0	A-2-4 (0)	22	7	11.3	62.6	7.7	18.4	0	100	96	29	--	--
S-19	LOCATION 23	- L -	WB ISL(U)	2.0 FY RT	1.0 - 4.0	A-4 (0)	20	8	23.3	36.3	13.0	27.4	3	90	77	39	14.7	--
S-20	LOCATION 23	- L -	WB ISL(L)	2.0 FY RT	4.0 - 6.0	A-6 (7)	32	18	4.3	44.9	17.8	33.0	0	99	96	57	20.4	--
S-21	LOCATION 25	- L -	WB EM	6.0 FY LT	1.0 - 4.0	A-2-4 (0)	20	4	14.4	63.7	6.7	15.2	2	97	92	23	--	--
S-22	LOCATION 43	- L -	WB OES	6.0 FW RT	3.5 - 6.0	A-6 (5)	32	17	4.0	47.8	15.0	33.2	13	86	85	52	31.1	--
S-23	LOCATION 44	- L -	WB OSS	2.0 FW RT	0.8 - 3.0	A-2-4 (0)	20	8	33.2	36.0	11.0	19.8	40	50	42	18	--	--
S-24	LOCATION 50	- L -	WB OES	9.0 FW RT	3.0 - 6.0	A-2-4 (0)	NP	NP	14.1	67.8	5.4	12.7	1	97	93	20	--	--
S-25	LOCATION 56	- L -	WB OES	8.0 FW RT	1.0 - 3.0	A-2-6 (0)	30	12	19.7	53.8	9.9	16.6	16	76	70	24	--	--
S-26	LOCATION 44	- L -	WB ISS	2.0 FY LT	3.0 - 6.0	A-6 (12)	35	20	0.0	37.1	25.3	37.6	4	93	93	70	22.3	--
S-27	LOCATION 45	- L -	WB EM	6.0 FY LT	3.5 - 6.0	A-6 (11)	34	20	0.0	30.7	39.8	29.5	19	81	81	70	15.6	--
S-28	LOCATION 56	- L -	EB ISS	2.0 FW RT	0.6 - 3.5	A-6 (13)	38	24	0.0	45.8	21.7	32.5	0	100	100	66	23.3	--
S-29	LOCATION 48	- L -	EB ISS	2.0 FY RT	3.0 - 6.0	A-7-6 (16)	41	27	0.9	35.7	19.3	44.1	2	98	98	68	24.7	--
S-30	LOCATION 48	- L -	EB ISL	3.0 FY LT	0.9 - 3.0	A-2-4 (0)	18	6	20.4	50.5	8.5	20.6	3	89	82	28	--	--
S-31	LOCATION 33	- L -	EB ISS	2. 0 FY RT	0.7 - 3.0	A-2-4 (0)	20	6	14.1	55.1	13.4	17.4	2	97	92	35	--	--
S-32	LOCATION 33	- L -	EB OSS	2.0 FW LT	0.7 - 4.0	A-4 (0)	22	7	20.3	43.9	15.3	20.5	3	93	84	41	17.2	--
S-33	LOCATION 26	- L -	EB ISS	2.0 FY LT	0.7 - 3.0	A-4 (0)	22	9	12.1	54.0	12.1	21.8	0	100	96	39	15.3	--
S-34	LOCATION 24	- L -	EB EM	6.0 FY RT	3.0 - 6.0	A-6 (15)	38	24	1.4	34.1	22.3	42.2	0	100	100	71	26.7	--
S-35	LOCATION 16	- L -	EB EM	6.0 FY RT	1.0 - 3.0	A-4 (1)	25	10	7.8	57.4	13.3	21.5	0	99	96	41	16.6	--

\*Denotes bulk sample collected for Standard Proctor, CBR, and chemical stabilization laboratory testing  
FY - From Yellow  
FW - From White

*Stephanie H. Huffman*  
Certified Lab Technician Signature

114-01-1203  
Certification Number



## LABORATORY TESTING SUMMARY

**PROJECT NUMBER:** 44648.1.4

**TIP:** R-5777C

**COUNTY:** CRAVEN

**DESCRIPTION:** US 70 - FROM THURMAN ROAD TO HAVELOCK BYPASS

[illegible]

\*Denotes bulk sample collected for Standard Proctor, CBR, and chemical stabilization laboratory testing

FY - From Yellow

FW - From White

Stephanie H. Huffman

Certified Lab Technician Signature

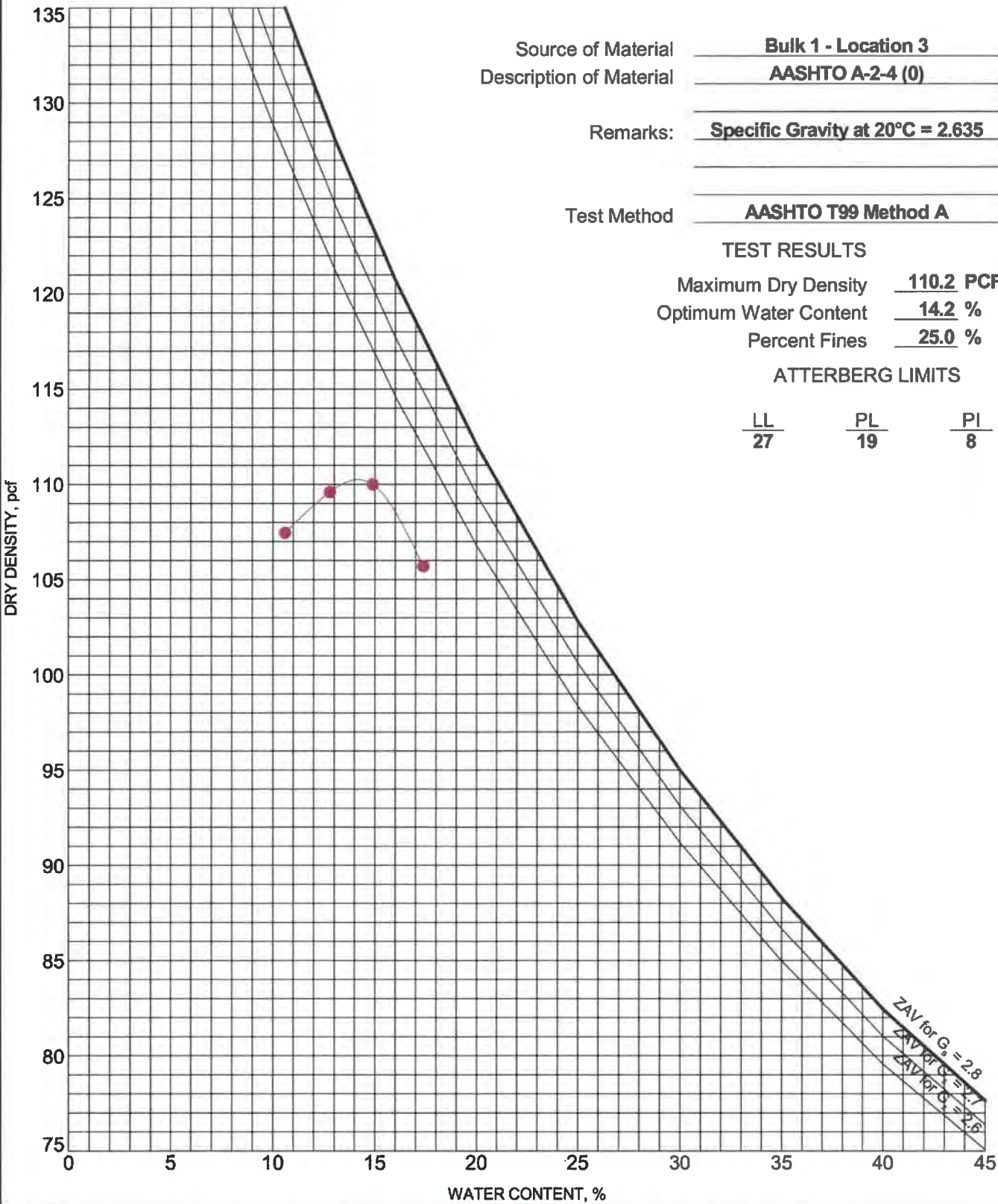
114-01-1203

Certification Number



MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557



REPORT FOR CALIFORNIA BEARING RATIO

Service Date: 08/14/19  
Report Date: 08/20/19

**Client**  
NCDOT Geotechnical Engineering Unit  
Attn: Mike Whalen  
1589 Mail Service Center  
Raleigh, North Carolina 27699-1500



2401 Brentwood Road, Suite 107  
Raleigh, NC 27604  
919-873-2211

**Project**  
R-5777C PDI - US 70 - Craven County  
US 70  
New Bern, North Carolina  
Project No. 70195160

SAMPLE INFORMATION

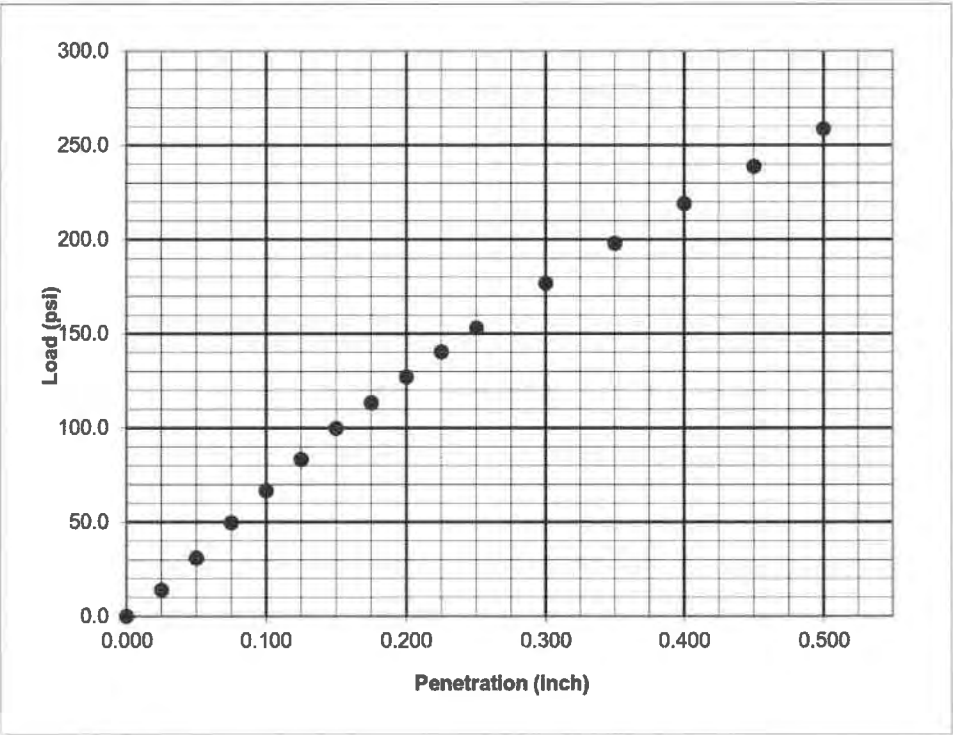
Sample Number:	Bulk 1	Proctor Method:	AASHTO T99 - Method A
Boring Number:	Location 3	Maximum Dry Density (pcf):	110.2
Sample Location:	WB EM -L-	Optimum Moisture:	14.2
Depth:	0-4'	Liquid Limit:	27
Material Description:	AASHTO A-2-4 (0)	Plasticity Index:	8

CBR TEST DATA

CBR Value at 0.100 inch	6.7
CBR Value at 0.200 inch	8.5
Surcharge Weight (lbs)	10
Soaking Condition	Soaked
Length of Soaking (hours)	96
Swell (%)	0.9

DENSITY DATA	
Dry Density Before Soaking (pcf)	104.1
Compaction of Proctor (%)	94.5

MOISTURE DATA	
Before Compaction (%)	14.0
After Compaction (%)	14.6
Top 1" After Soaking (%)	20.3
Average After Soaking (%)	18.1



Comments: CBR performed at 95% compaction.  
Services: Obtain soil sample and test for California Bearing Ratio

Terracon Rep: Stephanie Huffman  
Reported To: Hugo Santana  
Contractor:  
Report Distribution

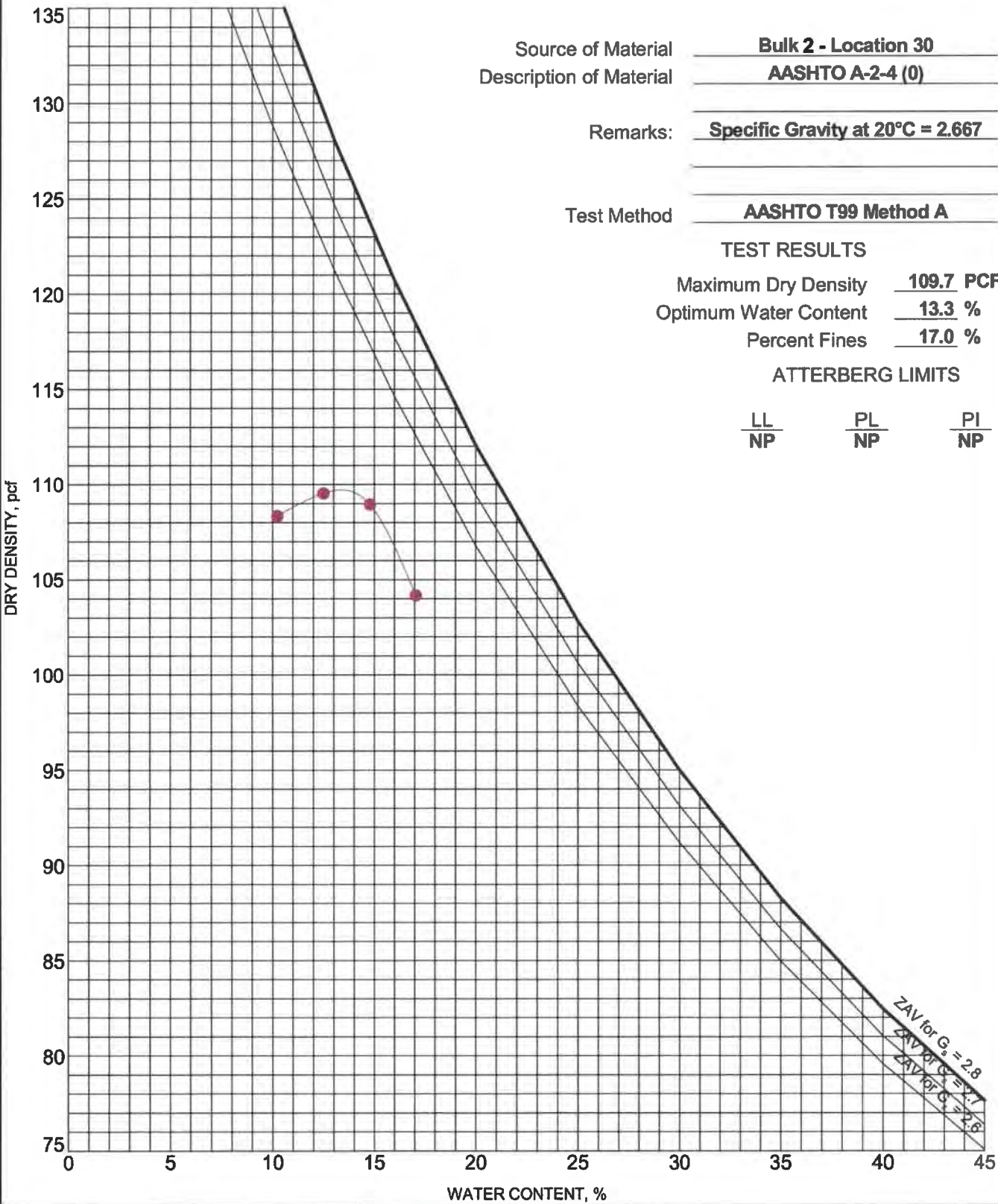
Reviewed by:   
Hugo Santana  
Geotechnical Project Manager

Test Methods: AASHTO T193  
The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written approval of Terracon. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.



MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557



REPORT FOR CALIFORNIA BEARING RATIO

Service Date: 08/14/19  
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2401 Brentwood Road, Suite 107  
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919-873-2211

**Client**  
NCDOT Geotechnical Engineering Unit  
Attn: Mike Whalen  
1589 Mail Service Center  
Raleigh, North Carolina 27699-1500

**Project**  
R-5777C PDI - US 70 - Craven County  
US 70  
New Bern, North Carolina

Project No. 70195160

SAMPLE INFORMATION

Sample Number:	Bulk 2	Proctor Method:	AASHTO T99 - Method A
Boring Number:	Location 30	Maximum Dry Density (pcf):	109.7
Sample Location:	WB OES -L-	Optimum Moisture:	13.3
Depth:	0-4'	Liquid Limit:	NP
Material Description:	AASHTO A-2-4 (0)	Plasticity Index:	NP

CBR TEST DATA

CBR Value at 0.100 inch	9.7
CBR Value at 0.200 inch	13.1

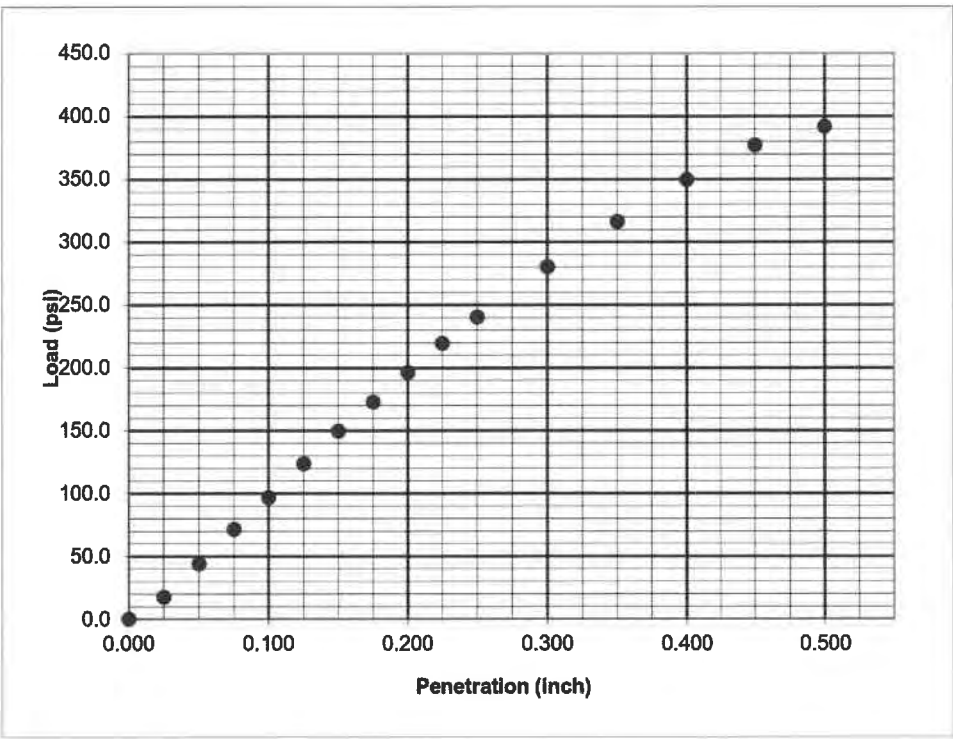
Surcharge Weight (lbs)	10
Soaking Condition	Soaked
Length of Soaking (hours)	96
Swell (%)	0.5

**DENSITY DATA**

Dry Density Before Soaking (pcf)	105.2
Compaction of Proctor (%)	95.9

**MOISTURE DATA**

Before Compaction (%)	13.3
After Compaction (%)	13.5
Top 1" After Soaking (%)	18.2
Average After Soaking (%)	16.7



**Comments:** CBR performed at 95% compaction.  
**Services:** Obtain soil sample and test for California Bearing Ratio

**Terracon Rep:** Stephanie Huffman  
**Reported To:** Hugo Santana  
**Contractor:**  
**Report Distribution**

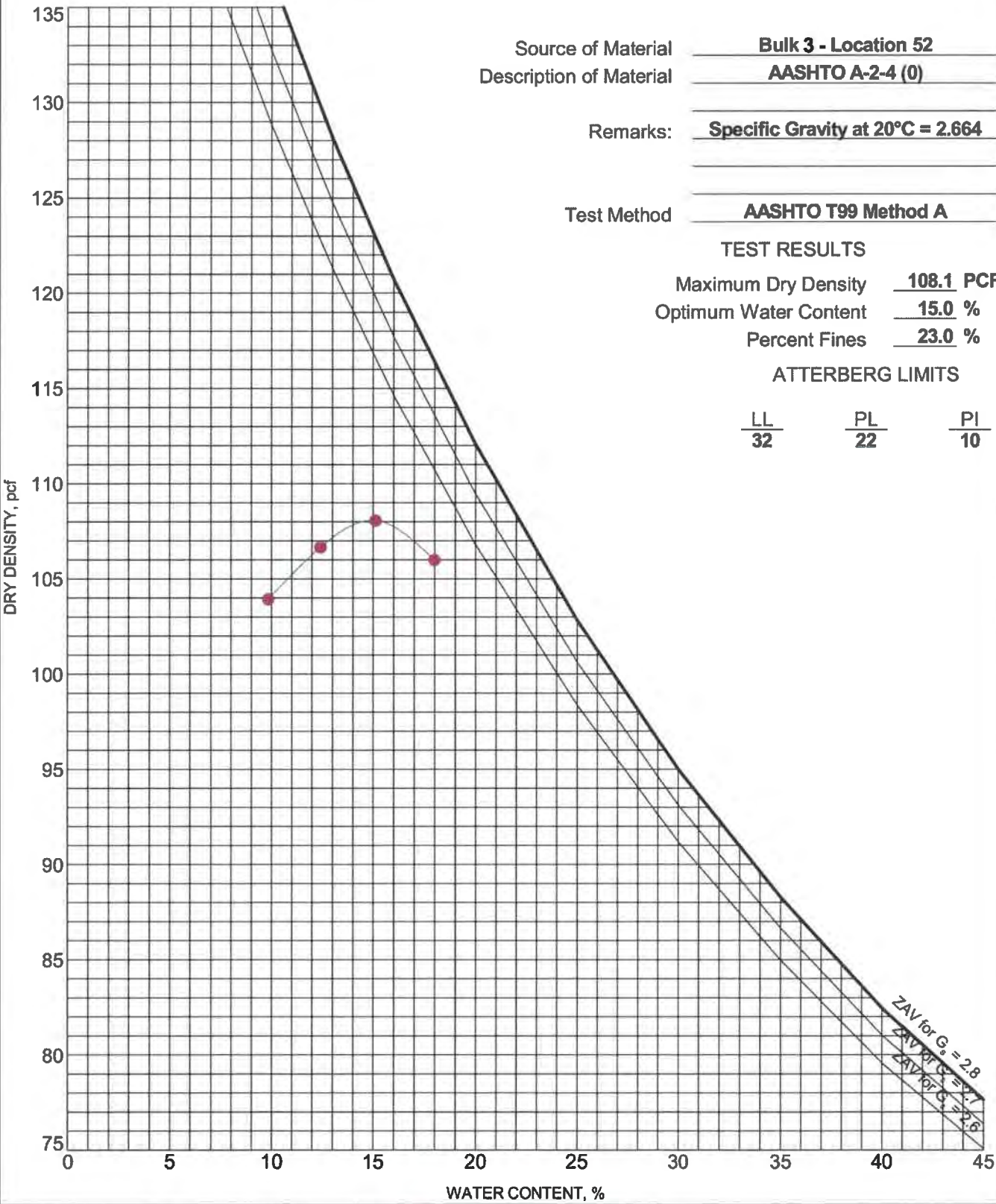
Reviewed by:   
Hugo Santana  
Geotechnical Project Manager

**Test Methods:** AASHTO T193  
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MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557



REPORT FOR CALIFORNIA BEARING RATIO

Service Date: 08/14/19  
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Client

NCDOT Geotechnical Engineering Unit  
Attn: Mike Whalen  
1589 Mail Service Center  
Raleigh, North Carolina 27699-1500

Project

R-5777C PDI - US 70 - Craven County  
US 70  
New Bern, North Carolina

Project No. 70195160

SAMPLE INFORMATION

Sample Number:	Bulk 3	Proctor Method:	AASHTO T99 - Method A
Boring Number:	Location 52	Maximum Dry Density (pcf):	108.1
Sample Location:	WB OES -L-	Optimum Moisture:	15.0
Depth:	0-4'	Liquid Limit:	32
Material Description:	AASHTO A-2-4 (0)	Plasticity Index:	10

CBR TEST DATA

CBR Value at 0.100 inch	7.8
CBR Value at 0.200 inch	8.9

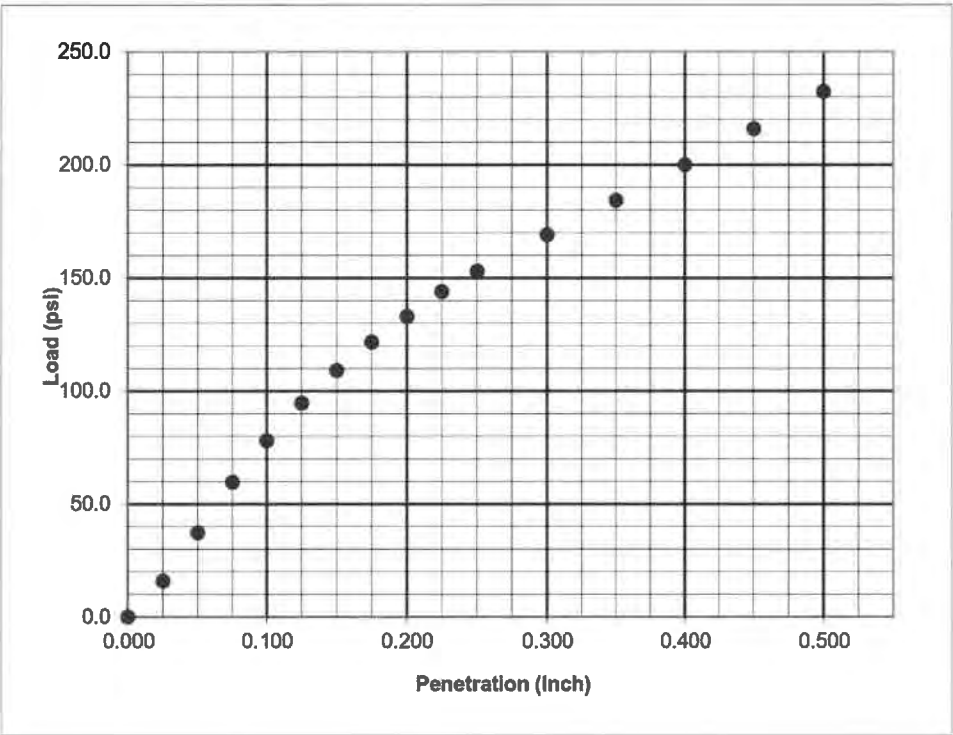
Surcharge Weight (lbs)	10
Soaking Condition	Soaked
Length of Soaking (hours)	96
Swell (%)	0.8

DENSITY DATA

Dry Density Before Soaking (pcf)	100.6
Compaction of Proctor (%)	93.1

MOISTURE DATA

Before Compaction (%)	15.0
After Compaction (%)	15.1
Top 1" After Soaking (%)	21.5
Average After Soaking (%)	20.1



Comments: CBR performed at 95% compaction.  
Services: Obtain soil sample and test for California Bearing Ratio

Terracon Rep: Stephanie Huffman  
Reported To: Hugo Santana  
Contractor:  
Report Distribution

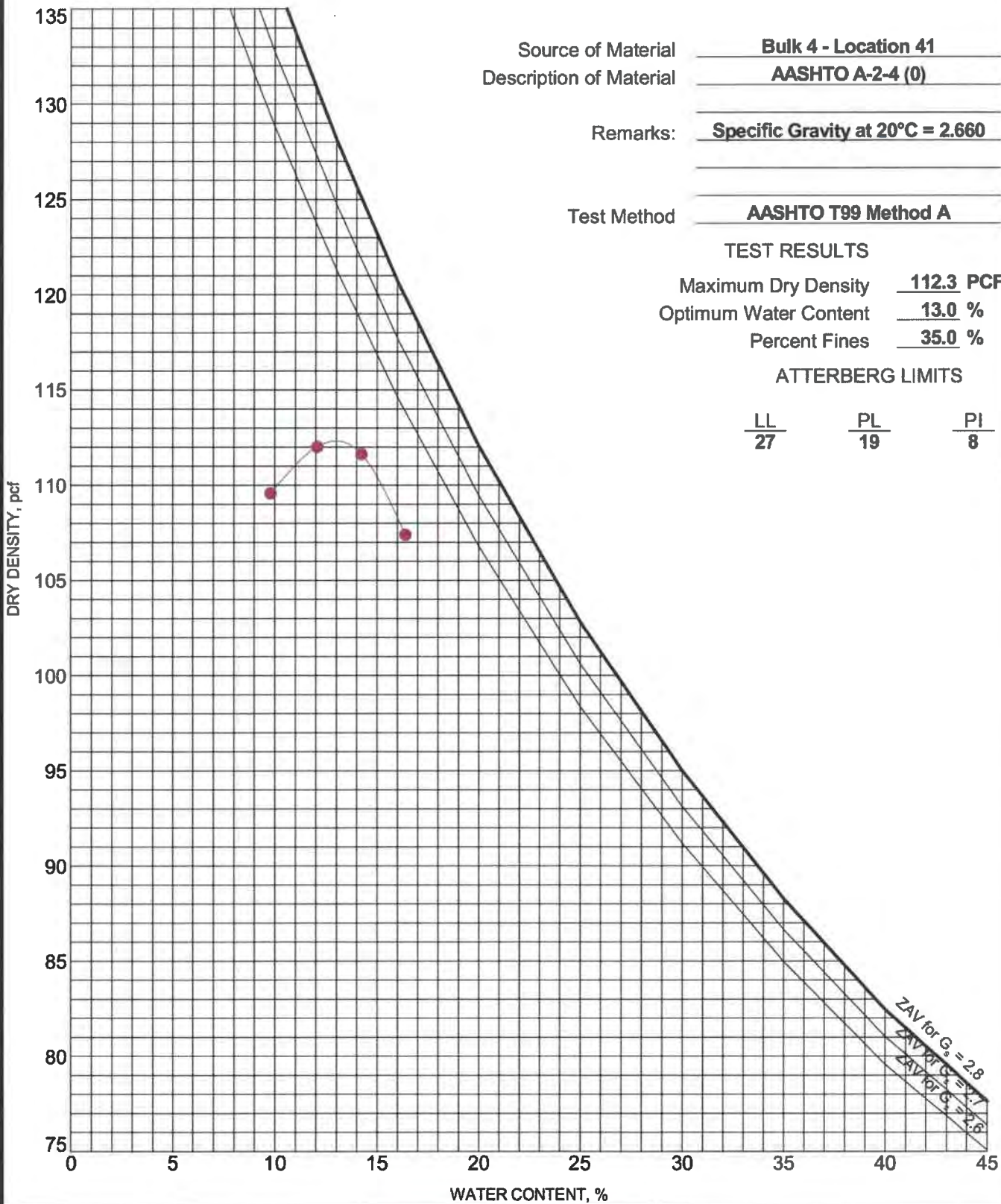
Reviewed by:   
Hugo Santana  
Geotechnical Project Manager

Test Methods: AASHTO T193  
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MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557



REPORT FOR CALIFORNIA BEARING RATIO

Service Date: 08/14/19  
Report Date: 08/20/19



2401 Brentwood Road, Suite 107  
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919-873-2211

Client

NCDOT Geotechnical Engineering Unit  
Attn: Mike Whalen  
1589 Mail Service Center  
Raleigh, North Carolina 27699-1500

Project

R-5777C PDI - US 70 - Craven County  
US 70  
New Bern, North Carolina

Project No. 70195160

SAMPLE INFORMATION

Sample Number:	Bulk 4	Proctor Method:	AASHTO T99 - Method A
Boring Number:	Location 41	Maximum Dry Density (pcf):	112.3
Sample Location:	EB EM -L-	Optimum Moisture:	13.0
Depth:	0-4'	Liquid Limit:	27
Material Description:	AASHTO A-2-4 (0)	Plasticity Index:	8

CBR TEST DATA

CBR Value at 0.100 inch	7.4
CBR Value at 0.200 inch	9.0

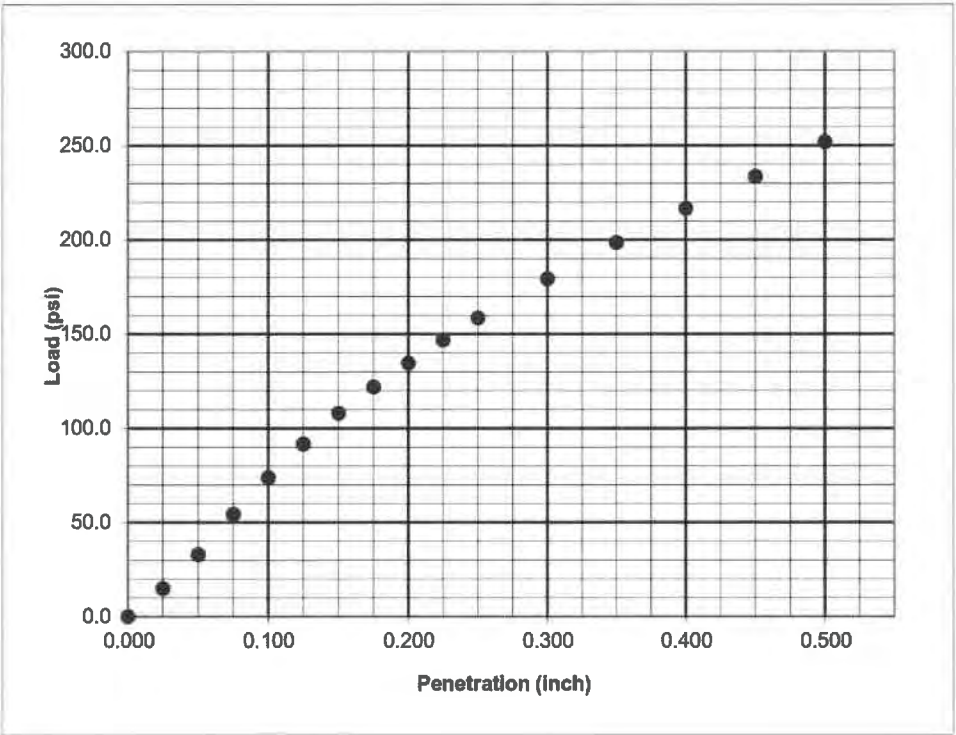
Surcharge Weight (lbs)	10
Soaking Condition	Soaked
Length of Soaking (hours)	96
Swell (%)	1.0

DENSITY DATA

Dry Density Before Soaking (pcf)	106.2
Compaction of Proctor (%)	94.6

MOISTURE DATA

Before Compaction (%)	13.0
After Compaction (%)	12.9
Top 1" After Soaking (%)	19.0
Average After Soaking (%)	17.4



Comments: CBR performed at 95% compaction.

Services: Obtain soil sample and test for California Bearing Ratio

Terracon Rep: Stephanie Huffman

Reported To: Hugo Santana

Contractor:

Report Distribution

Reviewed by:   
Hugo Santana  
Geotechnical Project Manager

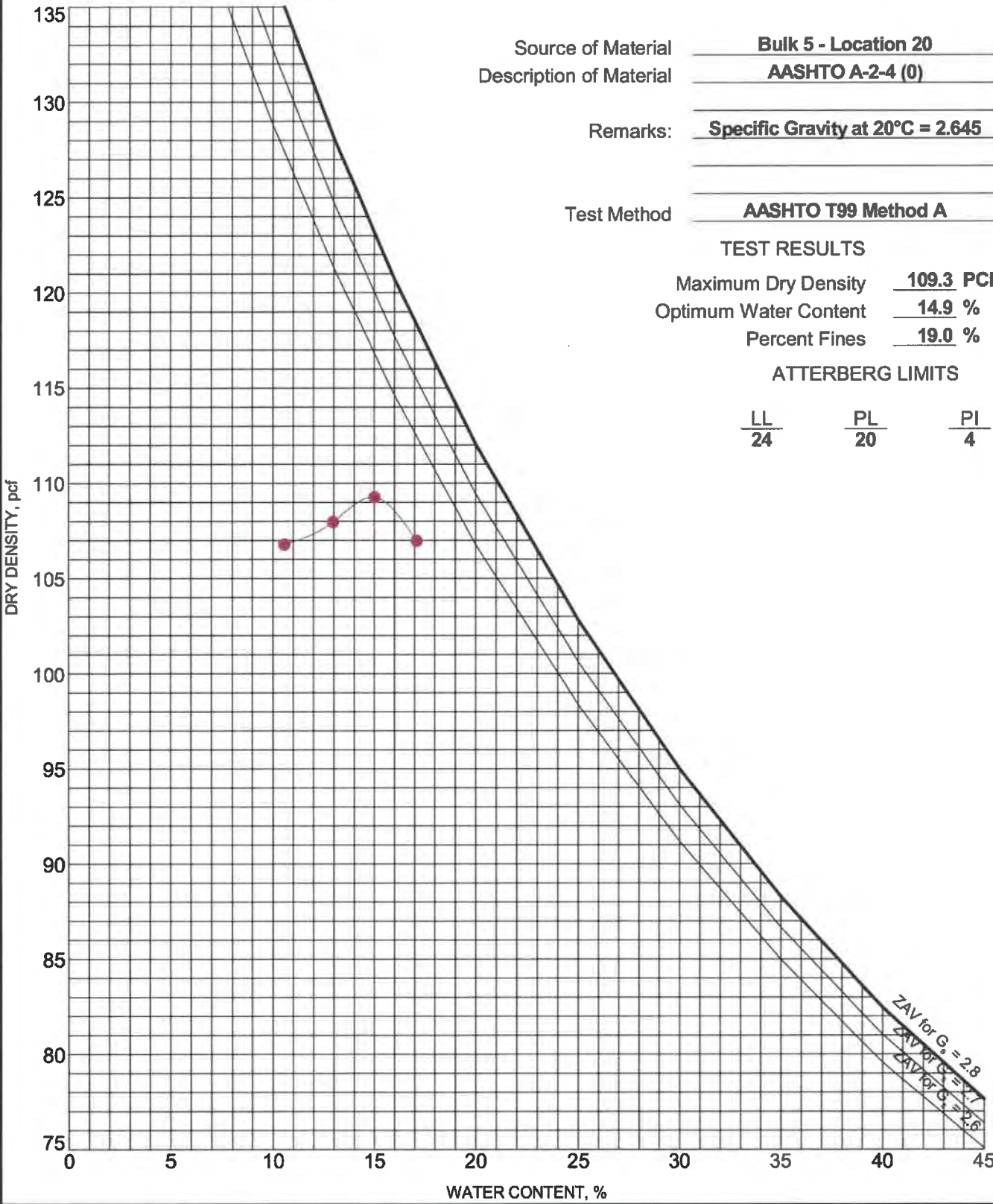
Test Methods: AASHTO T193

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MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557



REPORT FOR CALIFORNIA BEARING RATIO

Service Date: 08/14/19  
Report Date: 08/20/19

**Terracon**

2401 Brentwood Road, Suite 107  
Raleigh, NC 27604  
919-873-2211

**Client**  
NCDOT Geotechnical Engineering Unit  
Attn: Mike Whalen  
1589 Mail Service Center  
Raleigh, North Carolina 27699-1500

**Project**  
R-5777C PDI - US 70 - Craven County  
US 70  
New Bern, North Carolina

Project No. 70195160

SAMPLE INFORMATION

Sample Number:	Bulk 5	Proctor Method:	AASHTO T99 - Method A
Boring Number:	Location 20	Maximum Dry Density (pcf):	109.3
Sample Location:	EB EM -L-	Optimum Moisture:	14.9
Depth:	0-4'	Liquid Limit:	24
Material Description:	AASHTO A-2-4 (0)	Plasticity Index:	4

CBR TEST DATA

CBR Value at 0.100 inch	7.2
CBR Value at 0.200 inch	9.7

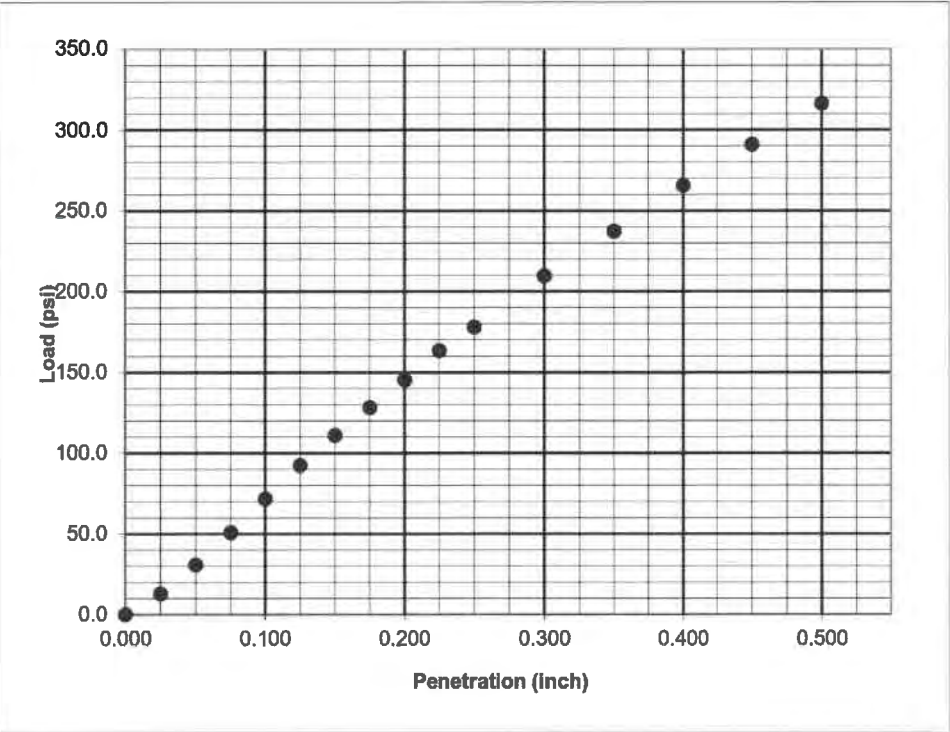
Surcharge Weight (lbs)	10
Soaking Condition	Soaked
Length of Soaking (hours)	96
Swell (%)	0.8

**DENSITY DATA**

Dry Density Before Soaking (pcf)	104.1
Compaction of Proctor (%)	95.2

**MOISTURE DATA**

Before Compaction (%)	14.7
After Compaction (%)	14.6
Top 1" After Soaking (%)	18.7
Average After Soaking (%)	17.7



**Comments:** CBR performed at 95% compaction.  
**Services:** Obtain soil sample and test for California Bearing Ratio

**Terracon Rep:** Stephanie Huffman  
**Reported To:** Hugo Santana  
**Contractor:**  
**Report Distribution**

Reviewed by:   
Hugo Santana  
Geotechnical Project Manager

**Test Methods:** AASHTO T193  
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